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Rev. 07/10/02





# U.S. Environmental Protection Agency

Supplemental Site Investigations/ Site Characterization Report Himco Dump Superfund Site Elkhart, Indiana

**Final** 

Volume 3 of 4 Appendix I

December 2002

### Appendix I

### Laboratory Results and Data Quality Evaluation Reports for 1996-2000 Ground Water, Soil and Soil Gas Samples

- •Laboratory Results for the 1996 Supplemental Site Investigation
  - •Data Quality Evaluation Reports and Laboratory Results
    for the
    1998 Supplemental Site Investigation
    and
    1999-2000 Supplemental Site Investigations

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Patucia fiscott

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	Jan 21, 1997	<b>,</b>
BJECT:	Review of Data Received for Review o	on December 23, 1996
FROM:	Stephen L. Ostrodka, Superfund Technical &	
TO:	Data User: <u>Superfund</u>	Patucia Stat for Star rotordla
ha e r	eviewed the data for t	the following case:
TE NAME	: _ HIMCO DUMP (IN)	
SE NUMB	ER:25143	SDG NUMBER: EAXX8
umber and	d Type of Samples:8	- Waters
ım, Nu	mbers: <u>EAXX8 - 9, E</u>	AXY0 - 5
borator	y: <u>DATACHEM</u>	Hrs. for Review: 4.5+1.6
llowing	are our findings:	
Th	4 data are acceptable and tracked narrative.	usable with the qualifications dwaited in the

: Frian Freeman Region 5 TPO Mail Code: SM-5J

Page 2 of 12 1/10/47

Case Number: 25143

site Name: HIMCO DUMP (IN)

SDG Number: EAXX8
Laboratory: DATACHEM

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Eight (8) preserved water samples, numbered EAXX8, EAXX9 and EAXY0 through EAXY5, were collected on November 12, 1996 and November 13, 1996. The lab received the samples on November 15, 1996 in good condition. All eight (8) samples were analyzed for the full list of volatile organic analytes. Six (6) samples (EAXX9, EAXY0 through EAXY4) were analyzed for the full list of semivolatile organic analytes. All were analyzed according to CLP SOW OLMO3.2 3/90.

se Number: 25143

te Name: HIMCO DUMP (IN)

SDG Number: EAXX8
Laboratory: DATACHEM

HOLDING TIME

No problems found for this qualification.

GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

No problems found for this qualification.

#### CALIBRATION

The following volatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Acetone, 1,2-Dichloroethane, 2-Butanone, 4-Methyl-2-Pentanone, 2-Hexanone EAXX8, EAXX9, EAXY0, EAXY1, EAXY2, EAXY3, EAXY4, EAXY4MS, EAXY4MSD, EAXY5, VBLK01, VHBLK01

The following semivolatile samples are associated with a continuing alibration percent difference (%D) outside primary criteria. Hits re qualified "J" and non-detects are qualified "UJ".

Pentachlorophenol
EAXX9, EAXY0, EAXY1, EAXY2, EAXY3, EAXY4,
EAXY4MS, EAXY4MSD, SBLK01

#### BLANKS

The following volatile samples have analyte concentrations reported plow the CRQL and less than or equal to ten times (10X) the associated method blank concentration. Reported sample concentrations have been elevated to the CRQL. Hits are qualified "U" and non-detects are not flagged.

Methylene Chloride EAXY2, EAXY3, EAXY4, EAXY4MS, EAXY4MSD, EAXY5, VHBLK01

The following semivolatile samples have analyte concentrations reported below the CRQL and less than or equal to ten times (10X) the associated method blank concentration. Reported sample concentrations have been elevated to the CRQL. Hits are qualified "U" and non-detects are not flagged.

Di-n-butylphthalate
EAXX9, EAXY0, EAXY1, EAXY2, EAXY3, EAXY4,
EAXY4MS, EAXY4MSD

Case Number: 25143 SDG Number: EAXX8 Site Name: HIMCO DUMP (IN) Laboratory: DATACHEM

#### 5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

No problems found for this qualification.

#### 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The following semivolatile matrix spike/matrix spike duplicate samples have percent recoveries which exceed the upper limit of the criteria window.

EAXY4MS

4-Nitrophenol, Pentachlorophenol

EAXY4MSD

4-Chloro-3-methylphenol, 4-Nitrophenol, 2,4-Dinitrotoluene, Pentachlorophenol

The presence of 4-Chloro-3-methylphenol, 4-Nitrophenol, 2,4-Dinitrotoluene and Pentachlorophenol in the unspiked sample, EAXY4, is qualified "J" and non-detects are not flagged.

#### 7. FIELD BLANK AND FIELD DUPLICATE

Sample EAXY3 was a field blank. Sample EAXY1 is a field duplicate of Sample EAXY0. Results are not qualified based upon the results of the field blank or field duplicates.

#### 8. INTERNAL STANDARDS

No problems found for this qualification.

#### 9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms it appears that all VOA, SVOA, and Pesticide/PCB compounds were properly identified.

#### 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following volatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

EAXY2

1,2-Dichloroethene (total)

EAXY4

Benzene

EAXY5

1,1-Dichloroethane, 1,2-Dichloroethene (total),

1,2-Dichloropropane, Trichloroethene, Benzene

Prepared By: A.C. Harvey/Lockheed-Martin ESAT

Date: January 10, 1997

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se Number: 25143

te Name: HIMCO DUMP (IN)

SDG Number: EAXX8
Laboratory: DATACHEM

VBLK01

Methylene Chloride

The following semivolatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

SBLK01

Di-n-butylphthalate

. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance. The GC baseline for the saticide analysis was acceptable.

. ADDITIONAL INFORMATION

None.

### CADRE Data Qualifier Sheet

<u>Qualifiers</u>	Data Qualifier Definitions
ŭ	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The anlayte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present)
Н	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

ase No: 25143 DG No: EAXX8					
PA E NUMBER: EGIU SAMPLE NUMBER:	EAXX8	EAXX9	EAXY0	EAXY1	EAXY2
AMPLE LOCATION: AMPLE TYPE: ATRIX/ANALYSIS: ILUTION FACTOR: ERCENT MOISTURE:	1 1	WI105A Routine Sample Water/LOW 1.0	WT111A Routine Sample Water/LOW 1.0	WT111AD Routine Sample Water/LOW 1.0	WT106A Routine Sample Water/LOW 1.0
OA					
hloromethane romomethane inyl Chloride hloroethane ethylene Chloride cetone arbon Disulfide ,1-Dichloroethene ,1-Dichloroethane ,2-Dichloroethane ,2-Dichloroethane '-Butanone ,1,1-Trichloroethane larbc trachloride iromodil@hloromethane ,2-Dichloropropane is-1,3-Dichloropropene irichloroethene )ibromochloromethane l,1,2-Trichloroethane enzene trans-1,3-Dichloropropene 3rc mmh2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2-Tetrachloroethane Toluene Chlorobenzene	10 U	10 U U 10	10 0 10 0 10 0 10 0 10 0 10 0 10 0 10	10 10 10 10 10 10 10 10 10 10 10 10 10 1	10 U

Wate its are reported in ug/L. Soil units are reported in ug/Kg.

TCL QUALIFIED SPREADSHEET Case No: 25143 Site: HIMCO DUMP Laboratory: DATACHEM INC. SDG No: EAXX8 EAXY4MS EAXY5 EPA SAMPLE NUMBER: EAXY3 EAXY4 FAXYAMSD REGIONAL SAMPLE NUMBER: WT116A WT115A SAMPLE LOCATION: FIELD BLANK SAMPLE TYPE: Routine Sample Matrix Spike Matrix Spike Dup Routine Sample Routine Sample Water/LOW Water/LOW MATRIX/ANALYSIS: Water/LOW Water/LOW Water/LOW DILUTION FACTOR: 1.0 1.0 1.0 1.0 1.0 PERCENT MOISTURE: VOA 1 Chloromethane 10 110 10 υ 10 10 יוט 1 10 10 U 10 U 2 IJ IJ 10 П 1 Bromomethane 10 ₹10 4 Vinyl Chloride 10 U 1.10 U 10 U 10 U U 3 и**10** ្ន 10 Uk U 10 U 10 Ü u Chloroethane 10 U ₹10 410 10 4 Methylene Chloride 10 u IJ 10 U U UK v Acetone 10 UJ 10 ₹10 UJ V 10 UJ **U10** UJ UJ ₹10 a Carbon Disulfide 10 U 10 10 11 710 ы U ₹1.1-Dichloroethene 10 U 410 47 47 €10 UK -1 5 À10 U 10 Jq → 1,1-Dichloroethane U 10 10 U U 121,2-Dichloroethene (total) 10 U 100 U 10 U 10 U 0.4 ío 110 ,:10 U ., \_(Chloroform U U 10 U 10 u 10 1210 10 10 121,2-Dichloroethane 10 UJ UJ 10 UJ UJ UJIZ 2-Butanone ;×10 10 UJ UJ 10 UJ 10 IJ UJ . 3 140 UKY 10 11,1,1-Trichloroethane 10 11 ,±10 u 10 u н 110 Carbon Tetrachloride U /10 U 10 U 10 U Ulis 10 10پر 1010 010 (¿Bromodichloromethane 10 10 U 11 10 ш u 110 11,2-Dichloropropane 10 U U 10 U 10 U 132 117 UK ; 0.5 U 10 Ecis-1,3-Dichloropropene 10 U υ 10 U J, it 10 46 45 4 Trichloroethene 10 U U ...10 Dibromochloromethane U 2u 710 11 10 11 10 п 10 1,1,2-Trichloroethane ,10 ٠٥ u 10 U 10 U 10 U U /\lambda 2 10 417 €Benzene 47 10 U 48 10 U 10 htrans-1,3-Dichloropropene 10 U U 10 U u 10 U 10 U 10 U 10 U 10 U <del>n∕</del>Bromoform 4-Methyl-2-Pentanone IJJ 10 10 UJ 10 HJ10 HJ 10 IJJ -v2-Hexanone 10 UJ 10 UJ 10 UJ 10 UJ 10 UJ ₹Tetrachloroethene 10 u 10 U 10 U 10 U 10 U 31,1,2,2-Tetrachloroethane 10 U 10 U 10 U 10 Ų 10 U Toluene 47 47 10 U 10 U 10 U 11 10 √.Chlorobenzene 10 U 10 U 46 46 & Ethylbenzene 10 U 10 U 10 U 10 U 10 U 10 U U % Styrene 10 11 10 U 10 10 U Axylene (total) υ 10 U 10 ψĺ 10 10 U 10

PAGE:

2

Water units are reported in ug/L. Soil units are reported in ug/Kg.

FILE NAME: EAXX8 DATE: 01/07/97 TIME: 14:32

TCL QUALIFIED SPREADSHEET					
ase No: 25143 OG P- EAXX8		Site: HIMCO DUMP Laboratory: DATACHEM INC.			
PA S LE NUMBER: EGIONAL SAMPLE NUMBER: AMPLE LOCATION:	VBLK01	VHBLK01			
AMPLE TYPE: ATRIX/ANALYSIS: ILUTION FACTOR: ERCENT MOISTURE:	Method Blank Water/LOW 1.0	Storage Blank Water/LOW 1.0			
CA					
hloromethane romomethane	10 U 10 U	10 U			
inyl Chloride	10 U				
hloroethane ethylene Chloride	10 U 0.8 J				
cetone	10 0				
arbon Disulfide	10 U	10 U	ì		
,1-Dichloroethene	10 U		Ì		
,1-Dichloroethane	10 U	1 1			
,2-Dichloroethene (total)	10 U	1			
:hlaraform	10 U		(		
,2-Dichloroethane	10 UJ	10 UJ			
?-Butanone	10 UJ	, , , , , , , , , , , , , , , , , , , ,			
1,1, ichloroethane	10 U	10 U			
Carbon Tetrachloride	10 U	1	į		
3romodichloromethane	10 0	10 U			
1,2-Dichloropropane	10 U	10 U	}		
zís-1,3-Dichloropropene	10 U				
Trichloroethene	10 U	1 1			
Dibromochloromethane 1,1,2-Trichloroethane	10 0	)			
Benzene	10 U	)	1		
tra: 7,3-Dichloropropene	10 U	10 0			
Bro m	10 U	10 U			
4-Mesuryl-2-Pentanone	ונט 10	10 UJ			
2-Hexanone	וט 10 טע	10 UJ			
Tetrachloroethene	10 0	10 U	1		
1,1,2,2-Tetrachloroethane	10 U	10 U	}		
Toluene	10 U	10 U			
Chlorobenzene	10 U	ان 10			
Ethylbenzene	10 0	10 U	Ì		
Styrene	10 U	10 0	1		
Xylene (total)	10 0	10 0			

PAGE: 3

Water units are reported in ug/L. Soil units are reported in ug/Kg.

الوزيان

TILE NAME: EAXX8 DATE: 01/07/97 TIME: 14:32 CADRE 2.3

TCL QUALIFIED SPREADSHEET

Case No: 25143 SDG No: EAXX8 Site: HIMCO DUMP Laboratory: DATACHEM INC.

EPA SAMPLE NUMBER: REGIONAL SAMPLE NUMBER:	EAXX9	EAXYO	EAXY1	EAXY2	EAXY3
SAMPLE LOCATION:	WT 105A	WT111A	WT111AD	WT106A	FIELD BLANK
SAMPLE TYPE:	Routine Sample				
MATRIX/ANALYSIS:	Water/LOW	Water/LOW	Water/LOW	Water/LOW	Water/LOW
DILUTION FACTOR:	1.0	1.0	1.0	1.0	1.0
PERCENT MOISTURE:					
BNA					
Phenol	10 U	10 ι	10 υ	10 U	10
ois(2-Chloroethyl)ether	10 U	10 U	10 U	10 U	10
2-Chlorophenol	10 U	10 U	10 U	10 U	10
1,3-Dichlorobenzene	10 U	10 U	-	10 U	10
,4-Dichlorobenzene	10 U	10 U		10 U	10
,2-Dichlorobenzene -Methylphenol	10 U	10 U 10 U		10 U 10 U	10
,2'-oxybis(1-Chloropropane)	10 0	10 0	10 0	10 U	10 10
-Methylphenol	10 0	10 U		10 U	10
Nitroso-di-n-propylamine	10 U	10 U	10 U	10 U	10
xachloroethane	10 U	10 ປ	10 U	10 U	10
trobenzene	10 U	10 U	10 U	10 U	10
ophorone	10 U	10 U	10 U	10 U	10
Nitrophenol	10 U	10 U	10 U	10 U	10
4-Dimethylphenol	10 U	10 U	10 U	10 U	10
s(2-Chloroethoxy)methane	10 U	10 U	10 U	10 0	10
4-Dichlorophenol 2,4-Trichlorobenzene	10 U	10 U 10 U	10 U	10 U 10 U	10 10
ohthalene	10 U	10 U	10 0	10 0	10
Chloroaniline	10 U	10 U	10 U	10 U	10
xachlorobutadiene	10 U	10 U	10 U	10 U	10
Chloro-3-methylphenol	10 U	10 U	10 U	10 U	10
Methylnaphthalene	10 U	10 U	10 U	10 U	10
kachlorocyclopentadiene	10 U	10 U	10 U	10 U	10
4,6-Trichlorophenol	10 U	10 U	10 U	10 U	10
4,5-Trichlorophenol Chloronaphthalene	25 U 10 U	25 U 10 U	25 U 10 U	25 U 10 U	25 10
Nitroaniline	25 U	25 U	25 U	25 U	25
methylphthalate	10 0	10 U	10 U	10 U	10
enaphthylene	10 u	10 U	10 ປ	10 U	10
6-Dinitrotoluene	10 U	10 U	10 บ	וט 10	10
Nitroaniline	25 U	25 U	25 U	25 U	25
enaphthene	10 U	10 U	10 U	10 U	10
4-Dinitrophenol	25 U	25 U	25 U	25 U	25
Nitrophenol	25 U	25 U	25 U	25 U	25
benzofuran 4-Dinitrotoluene	10 U	10 U 10 U	10 U	10 U	10 10
ethylphthalate	10 0	10 U	10 U	10 U	10
Chlorophenyl-phenylether	10 0	10 U	10 0	10	10
Jorene	10 U	10 U	10 U	i0 U	10
Nitroaniline	25 U	25 U	25 U	25 U	25
6-Dinitro-2-methylphenol	25 U	25 U	25 U	25 U	25
Nitrosodiphenylamine (1)	10 U	10 U	10 U	10 U	10
Bromophenyi-phenylether	10 U	10 U	10 U	10 0	10
xachlorobenzene ntachlorophenol	10 U	10 U	10 U	10 U	10
enanthrene	25 UJ 10 U	25 UJ 10 U	25 UJ 10 U	25 UJ 10 U	25 I
thracene	10 0	10 0	10 U	10 0	10
rbazole	10 0	10 ປ	10 U	10 0	10
-n-butylphthalate	10 U	10 U	10 U	10 0	10
uoranthene	10 U	10 U	10 U	10 U	10
rene	10 υ	10 U	10 U	10 U	10
tylbenzylphthalate	10 U	10 U	10 U	10 U	10
3'-Dichlorobenzidine	10 U	10 U	10 U	10 U	10
nzo(a)anthracene	10 U	10 U	10 U	10 U	10
rysene s(2-Ethylhexyl)phthalate	10 U	10 U 10 U	10 U 10 U	10 U	10 10
s(2-Ethylnexyl)phthalate	10 0	10 U	10 U	10 0	10
nzo(b)fluoranthene	10 0	10 0	10 U	10 0	10
nzo(k)fluoranthene	10 0	10 0	10 U	10 U	10
enzo(a)pyrene	10 U	10 U	10 U	10 U	10
ndeno(1,2,3-cd)pyrene	10 0	10 U	10 U	10 U	10
benz(a,h)anthracene	10 U	10 U	10 U	10 U	10
	10 0	10 U	10 U	10 U	10

FILE NAM.: EAXX8 DATE: 01/07/97 TIME: 14:32 CADRE 2.3

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TCL QUALIFIED SPREADSHEET

Se No: 25143 Site: HIMCO DUMP
G No: EAXX8 Laboratory: DATACHEM INC.

G RES EARAO					
A S. & NUMBER:	IEAXY4	EAXY4MS	EAXY4MSD	SBLK01	
GIONAL SAMPLE NUMBER:					
MPLE LOCATION:	WT115A		1		
MPLE TYPE:	Routine Sample	Matrix Spike	Matrix Spike Dup	Method Blank	
TRIX/ANALYSIS:	Water/LOW	Water/LOW	Water/LOW	Water/LOW	
LUTION FACTOR:	1.0	1.0	1.0	1.0	
RCENT MOISTURE:					
I <b>A</b>					
ienol	10 U	58	67	10 U	
is(2-Chloroethyl)ether	10 U	10 U	ט 10	10 0	
-Chlorophenol	10 0	56	66	10 0	
,3-Dichlorobenzene	10 U	10 U	10 U	10 U	
,4-Dichlorobenzene	10 U	27	35	10 0	{
,2-Dichlorobenzene	10 U	10 U	10 U	ט 10	
-Methylphenol	10 U	10 U	10 U	10 U	
,2'-oxybis(1-Chloropropane)	10 U	10 U	10 U	10 U	
-Methylphenol	10 U	10 U	10 U	10 U	
-Nitroso-di-n-propylamine	10 U	38	46 10 U	10 U	
exachloroethane	10 0	10 U	10 U 10 U	10 0	
itrobenzene	10 U	10 U	10 U	10 0	
sophorone ?-Nit henoi	10 0	10 U	10 U	10 0	
2,4-C _chylphenol	10 0	10 0	10 U	10 U	
ois(2-Chloroethoxy)methane	10 U	10 0	10 U	10 0	
2,4-Dichlorophenol	10 0	10 U	10 U	10 U	
1,2,4-Trichlarobenzene	10 υ	31	38	اں 10	
Naphthalene	10 U	10 U	10 U	10 U	
4-Chloroaniline	10 U	10 U	10 U	10 U	
Hexachlorobutadiene	ט 10	10 U	10 U	10 U	
4-Chloro-3-methylphenol	10 U	69	78	10 U	
2-M: "vlnaphthalene	10 0	10 U	10 U 10 U	10 U	
He orocyclopentadiene	10 U	10 0	10 U	10 0	
2,4, (richlorophenol 2,4,5-Trichlorophenol	25 U	25 U	25 U	25 U	
2-Chloronaphthalene	10 0	10 u	10 U	10 U	
2-Nitroaniline	25 U	25 U	25 U	25 U	
Dimethylphthalate	10 U	اں 10	10 U	ָוֹט 10 יַּ	
Acenaphthylene	10 U	10 U	10 U	ט 10	}
2,6-Dinitrotoluene	10 U	10 U	10 U	10 U	) 
3-Nitroaniline	25 U	25 U	25 U	25 U	
Acenaphthene	10 U	42	52 25 U	10 0	
2,4-Dinitrophenol	25 U	25 U 73	25 U <b>9</b> 0	25 U 25 U	
4-Nitrophenol Dib furan	25 U 10 U	10 U	າດ 10 ປ	10 0	
2,4 mitrotoluene	10 U	43	56	10 U	
Diethylphthalate	10 υ	10 U	10 U	10 U	
4-Chlorophenyl-phenylether	10 0	10 U	10 U	וס 10	
Fluorene	10 U	10 U	10 U	10 U	ļ
4-Nitroaniline	25 U	25 U	25 U	25 U	
4,6-Dinitro-2-methylphenol	25 U	25 U	25 U	25 U	ļ
N-Nitrosodiphenylamine (1)	10 0	10 0	10 U 10 U	10 U	
4-Bromophenyl-phenylether	10 U	10 U 10 U	10 U	10 0	
Hexachlorobenzene   Pentachlorophenol	25 UJ	110	100 J	25 UJ	
Phenanthrene	10 U	10 0	10 U	10 0	
Anthracene	10 U	10 U	ט 10	10 U	1
Carbazole	10 U	10 U	ט 10	10 U	
Oi-n-butylphthalate	10 U	10 U	10 U	1 1	
Fluoranthene	10 U	10 U	10 U	10 0	
Pyrene	10 U	38	43 10 U	10 U	
Butylbenzylphthalate	10 U	10 U 10 ນ	10 U 10 U	10 0	
3,3'-Dichlorobenzidine	10 U	10 U	10 U	10 U	ļ
Benzo(a)anthracene Chrysene	10 0	10 U	10 U	10 0	
h':'2-Ethylhexyl)phthalate	10 0	10 U	10 U	10 U	
octylphthalate	10 U	10 U	10 U	10 U	
octytpittiatate	10 υ	10 U	10 U	10 U	
Benzo(k)fluoranthene	10 U	10 U	10 U	10 U	Ì
Benzo(a)pyrene	10 U	10 ປ	ט 10	. 10 U	
Indeno(1,2,3-cd)pyrene	10 ט	10 U	10 ປ	10 U	
Dibenz(a,h)anthracene	10 U	10 U	10 0	10 0	
Benzo(g,h,i)perylene	ט 10	10 U	ָט 10 ט	10 U	
			<del></del>		

				1	ICS
Sample	TIC	Ret.Time	Conc.	Units	Flags
EAXY2					
	METHANE, CHLOROFLUORO-	3.86	11	UG/L	JN
	ETHER	6.54	7	UG/L	JN
	METHANE, DICHLOROFLUORO-	5.75	33	UG/L	JH
EAXY5					
	ETHER	6.54	22	UG/L	JN
	METHANE, DICHLOROFLUORO-	5.75	8	NC/F	JM
EAXY4					
	ETHER	6.54	12	UG/L	JN
	METHANE, DICHLOROFLUORO-	5.75	18	UG/L	JN
EAXY0					
	METHOXY ETHOXY ETHANOL ISOME	4.10	2	UG/L	J
EAXY1					
	ALKOXY ETHANOL ISOMER	4.10	2	UG/L	j
EAXY3					
	LINKNOWN KETONE	6.18	3	UG/L	J

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No:	CERCLIS No: IN
Case No: 25143	Site Name Location: Himco Dump
Contractor or EPA Lab: Data C	hem Data User: SF
	Sampled or Data Received: 12-23-96
If no, are traffic report or pa of-custody record? Yes N	lists been received? Yes No
Are basic data forms in? Yes No of samples claimed: 8 No	No
Received by: Aprille 6	urnets Date: 12-23-96
Received by LSSS: Signette	Burnet Date: 12-23-96
Review started: $1-10-97$	Reviewer Signature: <u>Alleson C. Hawe</u>
	Date review completed: 1-10-90
Copied by: Synette Bu	rnell Date: 1-23-97
Mailed to user by: Squette	Burnot Date: 1-23-97
DATA USER: Please fill in the blanks belo	
Data received by:	Date:
Data review received by:	Date:
Organic Data Complete [ ] S Dioxin Data Complete [ ] S	uitable for Intended Purpose [ ] / if OK uitable for Intended Purpose [ ] / if OK uitable for Intended Purpose [ ] / if OK uitable for Intended Purpose [ ] / if OK
PROBLEMS: Please indicate reasuses.	sons why data are not suitable for your
Received by Data Mgmt. Coordina	tor for Files. Data:

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	12-26-96			
SUBJECT:	Review of Data Received for R	eview on <u>Dec.</u>	17, 1996	
FROM:	Stephen L. Ost Superfund Tech	rodka, Chief (8 nical Support 8	SRT-4J) / F. Section	
TO:	Data User: <u>SF</u>			
We have r	eviewed the dat	a by CADRE for	the following case:	
SITE NAME	: Himco Dump (I	N)		
CASE NUMB	ER: 25143		SDG NUMBER: M	EAKN2
Number an	d Type of Sampl	es: 6 (Water)		
Sample Nu	mbers: MEAKN2-7			
Laborator	y: AATS		Hrs. for Review: 2	. 0
_	are our findin			
Al des	Il data a cribed in 4	re usable e attache	with the que of narrative.	alifications
			FINKElbera	

CC: Brian Freeman Region 5 TPO Mail Code: SM-5J

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION $oldsymbol{v}$

DATE:	
SUBJECT:	Review of Region V CLP Data Received for Review on
FROM:	Stephen L. Ostrodka, Chief (HSRL-5J) Superfund Technical Support Section
TO:	Data User: <u>SF</u>
	eviewed the data for the following case: :
CASE NUMB	er: <u>25143</u> sdg number: <u>MEAKN2</u>
Number and	d Type of Samples: 6 (Water)
	mbers: MEAKN2-7
Laborator	y: AATS Hrs. for Review: 20
Following	are our findings:

cc: Regional TPO
Brian Freeman
HSMC-5J

Page 2 of 4

Case Number: 25143 SDG Number: MEAKN2 Site Name: HINCO DUMP (IN) Laboratory: AATS

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Six low level water samples, MEAKN2-7 were collected on 11-13-96. The lab received the samples on 11-14-96 in good condition. All samples were analyzed for metals. All samples were analyzed using CLP SOW ILM04.0 analysis procedure.

Mercury analysis was performed using a Cold Vapor AA Technique. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectrometric procedure.

Reviewed By:

Date: 12~3が

Page 3 of 4
ase Number: 25143
SDG Number: MEAKN2
it 'ame: HINCO DUMP (IN)
Laboratory: AATS

#### . HOLDING TIME:

HOLDING TIME CRITERIA

INORGANICS

	Holdin	ng Time		рн
	Primary	Expanded	Primary	Expanded
Metals	180	0	2.0	0.0
Mercury	28	0	2.0	0.0
Cyanide	14	0	12.0	0.0

N problems were found for this qualification.

#### 2. CALIBRATIONS:

CALIBRATION CRITERIA

TORGANICS

...........

## Percent Recovery Limits

	Prim	mary	Expar	panded		
	Low	High	Low	High		
Cwanide	85.00	115.00	70.00	130.00		
A	90.00	110.00	75.00	125.00		
ICP	90.00	110.00	75.00	125.00		
Mercury	80.00	120.00	65.00	135.00		

No problems were found for this qualification.

#### . BLANKS:

1 1

LABORATORY BLANKS CRITERIA

DC-284: The following inorganic samples are associated with a blank concentration which is greater than the instrument detection limit (IDL). The sample concentration is also greater than the IDL and less than five times the blank concentration. Hits are qualified "J" and non-detects are not flagged.

Zinc

MEAKN2, MEAKN3, MEAKN4, MEAKN5, MEAKN6, MEAKN7

Reviewed By: Date: 123.161

Page 4 of 4

Case Number: 25143 SDG Number: MEAKN2 Site Name: HINCO DUMP (IN) Laboratory: AATS

#### 4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

MATRIX SPIKE CRITERIA

INORGANICS

\_\_\_\_\_\_

Percent Recovery Limits

Upper 125.0 Lower 75.0

Extreme lower 30.0

No problems were found for this qualification.

#### 5. LABORATORY AND FIELD DUPLICATE

No problems were found for this qualification.

#### 6. ICP ANALYSIS

DC-295: The following inorganic samples are associated with an ICP serial dilution percent difference which is not in criteria. The serial dilution result is greater than the sample result, indicating a potential negative interference. All samples are flagged "J".

Sodium

MEAKN2, MEAKN3, MEAKN4, MEAKN5, MEAKN6, MEAKN7

#### 7. GFAA ANALYSIS

No GFAA analysis was performed for in this case.

#### 8. SAMPLE RESULTS

All data, except those qualified above, are acceptable.

Reviewed By: 12-23-16 \( \)

TAL QUALIFIED SPREADSHEET

Case No: 25143 Site: HIMCO DUMP (IN) SDG No: MEAKN2 Laboratory: SWL - TULSA

EP. PLE NUMBER:	MEAKN2	MEAKN3		MEAKN4		MEAKN5	MEAKN6	
REGICIAL SAMPLE NUMBER:						1710/1		
SAMPLE LOCATION:	WT 105A	WT111A	_	WT111A-D		WT106A	UNREADABLE	
SAMPLE TYPE: MATRIX/ANALYSIS:	Routine Sample	Routine Sample	•	Routine Sample Water/LOW	,	Routine Sample Water/LOW	Routine Sampl Water/LOW	•
DILUTION FACTOR:	Water/Low	water/Low		water/Low		Mare: / LOW	Water/Low	
PERCENT SOLID:	1							
PERCERI SOLIU:								
INORG								
Aluminum.	17.0	U 280		267		50.8	17.0	ı
Antimony <sub>1</sub>		U 3.0	U	3.0	U	3.0 <sub>2</sub> U		
Arsenics	11	u 3.7	1	3. ı		5.6}	3.0	
Barium 4	5.4	105		107	į	101 -	1.0	
Beryllium <sub>G</sub> -	1.0	u 1.0	U	1.0	U	1.0≼ U	1.0	
Cadmium,	11	1.0	u	1.0	U	1.0. U	1.0	
Calcium∕t	38000	8160	1	8220		146000 /	10.0	ţ
Chromium%	1.1	u 1.8		1.5		1.0∮ ∪	1.0	ļ
Cobaltil	11	U 6.4	- 1	6.5	1	1.04 U	1.0	į
Copper (5	[ ]	u 3.3	- 1	3.0		1.0∞ ∪	1.0	(
I rong	13.1	4470		4360		Pr 6080 11	10.0	,
Lead ∧	11	U 1.0	U	1.0	U	1.0 <sub>12</sub> U	1.0	1
lagnes i um 🖰	10200	2980		2980		MR 18100, -	22.0	1
langanese <sub>14</sub>	5.0	335		333		394,-	1.0	(
lerc 5	F 1	u 0.20	u	0.20	U	0.20 <sub>-</sub> U	0.20	
licke. 5	11	U 7.2		7.2	1	1.810	1.0	
Potassium	1760	1600		1620		52. 4280,7	41.0	١
Selenium (%	[ ]	U 4.0	U	4.0	U	4.0 C U	4.0	
Silver 9	11	1.0	U	1.0	U	1.0. U	1.0	Į
iodium po	[ ]	3200	J	3270 2.6	١	1A 25800 2 J	153 2.0	
hallium »\		3.0	ļ	• • • •		2.9.1	1.0	
/anadium v	1.0 4	U 2.4 J 22.2	ار	2.4 21.2	, , ]	1.0 ° V 2.9 /	1.0	ţ
line of	3.6	22.2	J	۷۱.۷	J	2.9 / J	2.5	
.yr	11	<u> </u>	/		!			
LE LAE: MEAKN2 DATE: 12	/20/96 TIME: 11:39	CADRE 2.3			į		_	PAGE:

Water units are reported in ug/L. Soil units are reported in mg/Kg.

TAL QUALIFIED SPREADSHEET Site: HIMCO DUMP (IN) Case No: 25143 Laboratory: SWL - TULSA SDG No: MEAKNZ EPA SAMPLE NUMBER: MEAKN7D MEAKN7S MEAKN7 REGIONAL SAMPLE NUMBER: SAMPLE LOCATION: WT115-A Routine Sample Duplicate Sample | Matrix Spike SAMPLE TYPE: MATRIX/ANALYSIS: Water/LOW Water/LOW Water/LOW DILUTION FACTOR: PERCENT SOLID: INORG 1980 Atuminum: 32.0 24.3 Antimony z484 3.0 3.0 Arsenic \ 3.0 U 40.6 3.0 U 1940 Barium ≺ 33.3 32.6 Beryllium' 1.0 1.0 46.9 1.0 Cadmiumu u 1.0 U 46.1 211000 Calcium { 215000 Chromium 2 2.9 2.3 184 406 Cobalt 1.6 1.4 Copper 1.8 1.3 216 2180 3040 2220 Iron a U 18.4 Lead 14 1.0 1.0 Magnes i um i? 36000 35300 721 Manganese N 276 271 Mercury 15 0.20 0.20 0.80 456 Mickely 3.8 3.1 Potassium (\* 6520 6440 U 4.0 10.0 Selenium (%) U 4.0 Silver 1.0 U 1.0 47.4 Sodium 1 J 33100 33600 Thallium 46.2 U 2.2 Vanadium V 2.0 7.6 7.3 471 Zinc m 3.4 465 4.1 Cyanide 🔑

PAGE: 2

Water units are reported in ug/L. Soil units are reported in mg/kg.

FILE NAME: MEAKN2 DATE: 12/20/96 TIME: 11:39 CADRE 2.3

FILE NAME: MEAKN2 DATE:	12/20/96 TIME: 11:39
CRITERIA FILE: REG3193	
	DATA
Original	X  Qualified
QUALIFI	CATIONS PERFORMED
Quantitation Limit Percent Moisture Holding Time Calibrations Matrix Spikes IPC Internal Standards SMC/Surrogates System Performance Sample Cleanup	X CRDL Standards X ICS X LCS X Duplicates X Furnace AA QC X ICP Serial Dilutions X Sample Results Verification X Laboratory Blanks Field QC
PRIM	NT NON-DETECTS
Yes	No
PRINT R	REJECTED RESULTS
Yes	No

### CADRE Data Qualifier Sheet

<u>Qualifiers</u>	Data Qualifier Definitions
ŭ	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The anlayte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The data are unusable. (The compound may or may not be present)

#### Missing Contents Error Report

DG NO: MEAKN2
CASE NO: 25143

LABORATORY: SWL - TULSA AGENCY INPUT FILE: MEAKN2.IAS

FIELD DESCRIPTION	CADRE KEY	
Concentration	Record Type 30 Line 179 Format REAL NUMERIC	
Amount Added	Record Type 30 Line 179 Format REAL NUMERIC	
Concentration	Record Type 30 Line 181 Format REAL NUMERIC	
Amount Added	Record Type 30 Line 181 Format REAL NUMERIC	
Concentration	Record Type 30 Line 183 Format REAL NUMERIC	
Amount Added	Record Type 30 Line 183 Format REAL NUMERIC	
Concentration	Record Type 30 Line 185 Format REAL NUMERIC	
Amount Added	Record Type 30 Line 185 Format REAL NUMERIC	
Concentration	Record Type 30 Line 187 Format REAL NUMERIC	
Amount Added	Record Type 30 Line 187 Format REAL NUMERIC	
Concentration	Record Type 30 Line 189 Format REAL NUMERIC	
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Sentration	Record Type 30 Line 191 Format REAL NUMERIC	
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Concentration	Record Type 30 Line 193 Format REAL NUMERIC	
Maount Added	Record Type 30 Line 193 Format REAL NUMERIC	
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oncentration	Record Type 30 Line 197 Format REAL NUMERIC	
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oncentration	Record Type 30 Line 201 Format REAL NUMERIC	
mount Added	Record Type 30 Line 201 Format REAL NUMERIC	
oncentration	Record Type 30 Line 203 Format REAL NUMERIC	
mount Added	Record Type 30 Line 203 Format REAL NUMERIC	
oncentration	Record Type 30 Line 205 Format REAL NUMERIC	
mount Added	Record Type 30 Line 205 Format REAL NUMERIC	
oncentration	Record Type 30 Line 207 Format REAL NUMERIC	
nt Added	Record Type 30 Line 207 Format REAL NUMERIC	
nt Added Oncentration	Record Type 30 Line 209 Format REAL NUMERIC	
mount Added	1	
oncentration	1	
	Record Type 30 Line 211 Format REAL NUMERIC	
mount Added	Record Type 30 Line 211 Format REAL NUMERIC	
oncentration	Record Type 30 Line 213 Format REAL NUMERIC	
mount Added	Record Type 30 Line 213 Format REAL NUMERIC	
oncentration	Record Type 30 Line 215 Format REAL NUMERIC	
mount Added	Record Type 30 Line 215 Format REAL NUMERIC	
oncentration	Record Type 30 Line 217 Format REAL NUMERIC	
mount Added	Record Type 30 Line 217 Format REAL NUMERIC	
oncentration	Record Type 30 Line 219 Format REAL NUMERIC	
mount Added	Record Type 30 Line 219 Format REAL NUMERIC	
oncentration	Record Type 30 Line 221 Format REAL NUMERIC	
mount Added	Record Type 30 Line 221 Format REAL NUMERIC	
oncentration	Record Type 30 Line 226 Format REAL NUMERIC	
centration	Record Type 30 Line 228 Format REAL NUMERIC	
pentration	Record Type 30 Line 230 Format REAL NUMERIC	

#### Missing Contents Error Report

SDG NO: CASE NO:

Filename: MEAKN2

MEAKN2

25143

LABORATORY: SWL - TULSA
AGENCY INPUT FILE: MEAKN2.1AS

Page 2

FIELD DESCRIPTION	CADRE KEY	
ncentration	Record Type 30 Line 232 Format REAL NUMERIC	
ncentration	Record Type 30 Line 234 Format REAL NUMERIC	
ncentration	Record Type 30 Line 236 Format REAL NUMERIC	
ncentration	Record Type 30 Line 238 Format REAL NUMERIC	
ncentration	Record Type 30 Line 240 Format REAL NUMERIC	
ncentration	Record Type 30 Line 242 Format REAL NUMERIC	
ncentration	Record Type 30 Line 244 Format REAL NUMERIC	
ncentration	Record Type 30 Line 246 Format REAL NUMERIC	
ncentration	Record Type 30 Line 248 Format REAL NUMERIC	
ncentration	Record Type 30 Line 250 Format REAL NUMERIC	
ncentration	Record Type 30 Line 252 Format REAL NUMERIC	
ncentration	Record Type 30 Line 254 Format REAL NUMERIC	
ncentration	Record Type 30 Line 256 Format REAL NUMERIC	
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ncentration	Record Type 30 Line 260 Format REAL NUMERIC	
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ncentration	Record Type 30 Line 264 Format REAL NUMERIC	
ncentration	Record Type 30 Line 266 Format REAL NUMERIC	
ncentration	Record Type 30 Line 268 Format REAL NUMERIC	
ncentration	Record Type 30 Line 1577 Format REAL NUMERIC	
ount Added	Record Type 30 Line 1577 Format REAL NUMERIC	
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ncentration	Record Type 30 Line 1587 Format REAL NUMERIC	
ncentration	Record Type 30 Line 1592 Format REAL NUMERIC	
ncentration	Record Type 30 Line 1597 Format REAL NUMERIC	
ncentration	Record Type 30 Line 1602 Format REAL NUMERIC	
	·	

Date: 12/20/96 Time: 11:36 CADRE: 2.3

### QC EXCEPTION SUMMARY REPORT

CASE\SAS/1_25143	SITE: Hinco Dung (IN)	MATRIX: Water	WATER SAMPLE SPKI
DATA SET!	LABI <u>AATS</u>	CONCI VES	WATER SAMPLE DUP:
LAB QC # NEAKNR	REVIEWED BY: P. Che.		SOIL SAMPLE SPK:
DATE: 12-19-76	$(\int$		SOIL SAMPLE DUP:

		PORM 1	*****										POEM 9	PORM 6	POIM 1	RNA	RMD	MELD	RILD	COMMENTS
PORM /	MOLD		PORM )	PORM 1	PORM )	PORM 3	POIM 4	POIM 3	PORM 6	PORM 7	PORM 7	PORM 9	MAIAL	AQ DUP	AQ MULE	MAR	DUF	BLANK	DAIP	
M.D.ADIT	TIME	CALM	CALIB	CALIB BLANE	MATES BLANK	PERP BOIL BLAME	83 83	SOIL SOIL	BCHL DAR RPD	KCB AQ	BOAT"	PATOROGIE BELOTIONE BERTYF	CITALION	88	44		110		aro .	
ALLMINA												···								
ТИСМІТНА																				
AR SEREC																				
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PTEALTHIN																				
CADMIUM																				
CALCIUM																				
CHOMIN																				
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CYAMIDE	,							\												

### COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

	Name: A	MERI	ICAN_	ANALYT	ICAL_		Contract	: 68-D	5-0141
Lab	Code: A	ATS_	·	Case 1	oV	25143	SAS No.:		SDG No.:MEAKN2
SOW	No.: IL	M04.	۵.		•				
			_MEA _MEA _MEA _MEA _MEA _MEA	Sample .KN2 .KN3 .KN4 .KN5 .KN6 .KN7 .KN7	No.		Lab Sar _27646 _27646. _27646. _27646. _27646. _27646. _27646.	.01 .02 .03 .04 .05 .06 .06D	OEC 17
~~ <b>~</b>	ICD in	t a va	1040	nt 00**		na anni			Yes/No YES
ere	ICP int	rere	Teme.	ne corr	eccic	ms appr	ieu :		ies/NO ies
ere	ICP bac					applie erated			Yes/No YES
						correct			Yes/No NO_
omme	since	this Thi	s roi	inds doi es how	wn to	10, th	is does n	ot need	difference of 10.3  an "E" flag on the defect report as
ond: the: n tl n f: anag	itions or r than t his hard loppy di	of the depression of the depre	he cond y day tte-! née,	ontractitions ta pack has been as yer	, bot detail age a n ant in the left of th	h techn led abo ńd in t horized	ically and ve. Rele he comput by the L following Name:	d for o ase of er-read aborato g signa Debora	the terms and ompleteness, for the data contained able data submitted by Manager or the ture.  The J. Beree for  D. Ruckman
ate	:	Dec	embe	r (13, 1	996		Title:	Inorga	nic Program Manager

# INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

) Name: AME	RICAN_ANALYT	CICAL	Contract: 6	8-D5-014	MEAKN2 105R								
) Code: AAT	SDG No.: MEAKN2												
rix (soil/	rix (soil/water): WATER Lab Sample ID: 27646.01												
rel (low/med	d): LOW			Date Re	ceived: 11/15/96								
Golids:	0.	0		•									
Co			/L or mg/kg dry	y weight	): UG/L_ PPb								
	CAS No.	Analyte	Concentration	C Q	М								
lor Before:	7440-48-4 7440-50-8 7439-89-6 7439-92-1 7439-95-4 7439-96-5 7439-97-6 7440-02-0		y Before: CLEA	UUBUUBUUBUUBUUBUUBUUB	P P P P P P P P P P P P P P P P P P P								
	COLORLESS	Clarit	y After: CLEA	rk_	Artifacts:								
mments:													
.60.00.													

# 1 INORGANIC ANALYSES DATA SHEET

Matrix (soil/wat Level (low/med):		se No.: 25	143 SAS No.			MEAKN3 ///Å
Level (low/med):	ter): WATE			Ξ.		SDG No.: MEAKN2
•		R		L	ab Samp	le ID: 27646.02
•	: LOW			D	ate Rec	eived: 11/15/96
Solids:	0.0	<del></del>				.,,
			/L or mg/kg dr	У	weight)	: UG/L_
C	CAS No.	Analyte	Concentration	С	Q	М
777777777777777777777777777777777777777	7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-48-4 7440-50-8 7440-50-8 7440-95-1 7439-95-1 7439-95-1 7439-97-6 740-02-0 782-49-2 782-49-2 782-49-2 782-49-2 782-49-2 782-49-66-6		3.3 4470 1.0 2980 335 0.20 7.2 1600 4.0 1.0 3200 3.1		-	P_P_P_P_P_P_P_P_P_P_P_P_P_P_P_P_P_P_P_

# 1 : INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

o Name: AME	RICAN_ANALYT	FICAL	Contract: 6	1-8	05-0141		MEAKN4 ((AD
o Code: AAT	S Ca	ase No.: 25	143_ SAS No.	: _	·	S	DG No.: MEAKN2
	water): WATE						ID: 27646.03
vel (low/med	d): LOW				_		ed: 11/15/96
Solids:	0.						Ca. 11, 10, 50
			/L or mg/kg dr	y w	reight)	: U	G/L_
	CAS No.	Analyte	Concentration	С	Q	М	
	7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-48-4 7440-50-8 7439-92-1 7439-95-4 7439-96-5 7439-97-6 7440-02-0 7440-09-7 7782-49-2 7440-28-0 7440-66-6	Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium Zinc	267 3.0 3.1 107 1.0 1.0 8220 1.5 6.5 3.0 4360 1.0 2980 333 0.20 7.2 1620 4.0 1.0 3270 2.6 2.3 21.2		E		by 12-19-96
			y Before: CLEA	_			kture:
lor After:	COLORLESS	Clarit	y After: CLEA	LR_		Art	ifacts:
mments:							
The state of the s			<del></del>				

# 1 INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	NO
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		INORGANIC	ANALYSES DATA	SHEET	
ab Name: AME	RICAN_ANALYT	'ICAL	Contract: 6	8-D5-014:	meakns jula
ab Code: AAT	S Ca	se No.: 25	143_ SAS No.	:	SDG No.: MEAKN
atrix (soil/	water): WATE	R		Lab Samp	ple ID: 27646.04
evel (low/med	d): LOW_			Date Red	ceived: 11/15/96
Solids:	0.	0			
Co	oncentration	Units (ug	/L or mg/kg dr	y weight)	: UG/L_
	CAS No.	Analyte	Concentration	C Q	М
	7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-48-4 7440-50-8 7439-89-6 7439-92-1 7439-95-4 7439-96-5 7439-97-6 7440-02-0 7440-09-7 7782-49-2 7440-22-4	Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium	50.8 3.0 5.6 101 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0		P P P P P P P P P P P P P P P P P P P
olor Before:	COLORLESS	Clarit	y Before: CLEA	IR_	Texture:
olor After:	COLORLESS	Clarit	y After: CLEA	.R_	Artifacts:
omments:					

# 1 INORGANIC ANALYSES DATA SHEET

		INORGANIC .	1 ANALYSES DATA	SHEET	EPA SAMPLE NO.
b Name: AME	RICAN_ANALY	TICAL	Contract: 6	58-D5-0141	MEAKN6 FISH PRO
b Code: AAT	S Ca	ase No.: 25	SAS No.	:	SDG No.: MEAKN2
trix (soil/	water): WATE	ER		Lab Sampl	e ID: 27646.05
vel (low/me	d): LOW_			Date Rece	eived: 11/15/96
Solids:	0.	0			
C	CAS No.	Units (ug/	L or mg/kg dr Concentration	- 	UG/L_
	7429-90-5 7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-47-3 7440-48-4 7440-50-8 7439-89-6 7439-95-4 7439-96-5 7439-97-6 7440-02-0 7440-02-0 7440-23-5 7440-28-0 7440-66-6	Aluminum_ Antimony_ Arsenic_ Barium_ Beryllium Cadmium_ Calcium_ Chromium_ Cobalt_ Copper_ Iron_ Lead_ Magnesium Manganese Mercury_ Nickel_ Potassium Selenium_ Silver_ Sodium_ Thallium_ Vanadium_ Zinc	17.0 3.0 3.0 1.0 1.0 1.0 1.0 1.0 1.0 2.0 1.0 22.0 1.0 41.0 4.0 1.53 2.0 1.0 2.5	U U U U U U U U U U U U U U U U U U U	P P P P P P P P P P P P P P P P P P P
lor Before:	COLORLESS	Clarit	y Before: CLE	AR_	Texture:
lor After:	COLORLESS	Clarit	y After: CLE	AR_	Artifacts:
mments:					

FORM I - IN

ILM04.0

# 1 INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

		INORGANIC	ANALYSES DATA	SHEET	
Lab Name: AME	RICAN_ANALYT	'ICAL	Contract: 6	8-D5-01	MEAKN7 . 11.
Lab Code: AAT	S Ca	se No.: 25	143_ SAS No.	:	SDG No.: MEAKN
Matrix (soil/	water): WATE	R		Lab Sa	ample ID: 27646.06
Level (low/med	d): LOW_	<del>_</del>		Date R	Received: 11/15/96
Solids:	0.	0			,
Co	oncentration	Units (ug	/L or mg/kg dry	y weigh	nt): UG/L_
	CAS No.	Analyte	Concentration	C Q	M
	7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-48-4 7440-50-8 7439-89-6 7439-95-4 7439-95-4 7439-96-5 7439-97-6 7440-02-0 7440-02-0 7440-23-5 7440-28-0 7440-66-6	Aluminum_ Antimony_ Arsenic_ Barium Beryllium Cadmium_ Calcium_ Chromium Cobalt_ Copper_ Iron_ Lead_ Magnesium Manganese Mercury_ Nickel Potassium Selenium_ Silver_ Sodium_ Thallium_ Vanadium_ Zinc	1.0 215000 2.9 1.6 1.8 2220 1.0 36000 276 0.20 3.8 6520 4.0 1.0 33600 2.2 7.6 4.1	U B B B B U E B B B B B B B B B B B B B	P P P P P P P P P P P P P P P P P P P
olor Before:	COLORLESS COLORLESS		y Before: CLEA y After: CLEA	_	Texture:Artifacts:
omments:	COLORDESS	CIALIC	y Alter: CDBA		AICITACES:

# U.S. EPA - CLP

# 3 BLANKS

Name:	AMERICAN_ANAL	YTTCAL	Contract: 68-D5-C	141
Code:	AATS	Case No.: 25143_	SAS No.:	SDG No.: MEAKN2

paration Blank Matrix (soil/water): WATER

paration Blank Concentration Units (ug/L or mg/kg): UG/L\_

ıalyte	Initial Calib. Blank (ug/L)	C	Cont.		uing Calib lank (ug/L 2	tion 3	С	Prepa- ration Blank C	М
uminum  it' ny  se c  irium 'ryllium dmium ilcium iromium balt pper con ead ignesium inganese ercury ickel ptassium elenium ilver pdium anadium inc	-17.7 -3.0 3.0 1.0 1.0 -18.9 1.0 -18.5 1.0 -23.8 1.0 -23.8 1.0 -23.8 1.0 -23.8 1.0 -23.8 1.0 -23.8 1.0 -23.8 1.0 -23.8 -23.8 -3.5 -3.5 -1.0 -23.8 -3.5		17.0 3.0 3.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	- מממממממממממממממממממ	-21.0 3.0 3.0 1.0 1.0 1.0 -18.2 1.0 -18.2 1.0 -1.0 -22.3 1.0 -22.3 1.0 -22.3 1.0 -36.0 2.0 -1.0 -2.0	-20.2 -3.0 -3.0 -1.0 -1.0 -1.0 -15.2 -1.0 -1.0 -1.9 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0	ו מממממממן מממשממממשמממממש	17.00 U 3.00 U 3.00 U 1.00 U	P P P P P P P P P P P P P P P P P P P

	** Solid **
	Code: AATS  (SOIL/Water): WATER  CONCENTRATION  SILIMITE  SPIKE SAMPLE:  CONTROL  FORM V (Part 1) - IN  Cas  Cas  Cas  Control  Control  Control  AATER  Result (SSR)  FORM V (Part 1) - IN  Cas  Cas  Cas  Cas  Concentration Units  Cas  Concentration Units  Control  AATER  Result (Sample (SSR)  ABA 9300  ABA 9300  ABA 9300  ABA 9300  ABA 9930  AB
$I_{LM}$	No: 25143 Contrac No: 25143 SAMPLE PEC SAS: SAMPLE PEC Contrac SAS: SAS: SAS: SAS: SAS: SAS: SAS: SAS:
ILMO4.0 mary	RECOVERY  Level  Level  Level  SAS No.:  Level  Level  SOO.00

""C: AMERICAN\_ANALYTICAL\_

Lab Code: AATS

SPIKE SAMPLE RECOVERY



Maty Maty Maty % So, % So, Antin Cobalt
Ma  Ant  Ant  Ant  Cobalt  Cob
Matri % Soli % Soli % Soli Antino Antino Antino Antino Antino Antino Berylli Coadit Berylli Coalcium Cobalt Fonder Fonder Fonder Serylli Serylli Coalcium Cobalt Fonder Fo
Matrix Cod Matrix ( \$ Solids  \$ Solids  \$ Solids  Analyte  Antimony  Beryllim  Cadmium  Cadmium  Thromium  Dobalt  On  Inm  Johan Sium  Jo
Matrix (Soil/wate Solids for Samp)  Solids for Samp)  Analyte Concent Limit Continum  Thin minum  Yellium  Sepical  Sepi
Ars Sample Sampl
Concentrate Cansilo Control Cample:  Concentrate Control Cample:  Control
Matrix (SOII/Water): Water): Water Solids for Sample:  Concentration Analyte Control Antiminum Antiminum Antiminum Conium Contium Cont
Case WATER  -0.0  ion Unit  Sample  Sample  215188 1 2215188 1 215188 1 215188 1 215188 1 215188 1 215188 1 215188 1 2151888 1 215188 1 215188 1 215188 1 215188 1 215188 1 215188 1 21518888 1 21518888 1 21518888 1 21518888 1 215188888 1 21518888 1 21518888 1 21518888 1 215188888 1
## I CAL  BER  O  O  O  O  O  O  O  O  O  O  O  O  O
CONTRACTOR OF THE PROPERTY OF
CONTRACT:  SAS NG  OF MG/KG dry.  CONTRACT:  SAS NG  OF MG/KG dry.  CODUPLICATES  SOS  OF MG/KG dry.  Duplicate  3.000  3
TCATES  SAS N  S
11.68

FORM VI

IN

ILMO4.0

# U.S. EPA - CLP

# 9 ICP SERIAL DILUTION

EPA SAMPLE NO.

MEAKN2L

Lab Name: AMERICAN\_ANALYTICAL\_\_\_\_ Contract: 68-D5-0141

Lab Code: AATS\_\_ Case No.: 25143\_ SAS No.: \_\_\_\_ SDG No.: MEAKN2

Matrix (soil/water): WATER

Level (low/med): LOW\_\_\_

Concentration Units: ug/L

Analyte	Initial Sample Result (I) C	Serial Dilution Result (S)	С	% Differ- ence	Q	M
Aluminum_ Antimony_ Arsenic_ Barium Beryllium Cadmium_ Calcium_ Chromium_ Cobalt_ Copper_ Iron_ Lead Magnesium Manganese Mercury_ Nickel Potassium Selenium_ Silver Sodium Thallium_ Vanadium_ Zinc_	17.00 U 3.00 U 3.00 U 3.00 U 3.00 U 5.41 B 1.00 U	85.00 15.00 15.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 9414.21 5.33 5.00 1934.54 20.00 5.00 4919.11 10.00 5.00 10.00	מממשמחשם ששממממם מממממם			

By 12-19-

# U.S. EPA - CLP

10
Instrument Detection Limits (Quarterly)

∴ Name: AMERICAN_A	ANALYTICAL	Contract:	68-D5-0141			
b Code: AATS	Case No.: 25143_	SAS No.:		SDG	No.:	MEAKN2
P ID Number:	TJA_ET2	Date:	10/03/96			
ame AA ID Number :						
rnace AA ID Number	:					

	Wave-				
	length	Back-	CRDL	IDL	
Analyte	(nm)	ground	(ug/L)	(ug/L)	M
		-	]	]	
Aluminum	308.22		200	17.0	P
Antimony	206.83		60	3.0	P
Arsenic	189.04		10	3.0	P
Barium	493.41		200	1.0	P
Beryllium	313.04		5	1.0	P
Cadmium	_226.50		5	1.0	P
Calcium_	_317.93_		5000	10.0	P
Chromium_	_267.72_		10	1.0	P
Cobalt	_228.61_		50_	1.0	P
Copper	_324.75_		25_	1.0	P
Iron	_271.44_		100_	10.0	P
Lead	_220.35_		3_	1.0	P
Magnesium	_279.08_		5000	22.0	P
Manganese	_257.61_		15_	1.0	P
Mercury	<del></del>		0.2		NR_
Nickel	_231.60_		40_	1.0	P
Potassium	766.49		5000	41.0	P
Selenium_	_196.02_		5_	4.0	P
Silver	328.07		10_	1.0	P
Sodium	_588.99_		5000	36.0	P
Thallium_	190.68		10	2.0	P
Vanadium_	_292.40_		50_	1.0	P
Zinc	_213.86_		20	2.0	P
<u> </u>			_		i

mments:		
	 <del></del>	

# 10 Instrument Detection Limits (Quarterly)

المني Name: AMERICAN_	ANALYTICAL	Contract:	68-D5-0141			
Lab Code: AATS	Case No.: 25143_	SAS No.:		SDG No	· . : 1	MEAKN2
ICP ID Number:	·	Date:	10/03/96			
Flame AA ID Number	: PS200B					
Furnace AA ID Number	C:		,			

	<del>,</del>		<del>,</del>		<del></del>
Analyte	Wave- length (nm)	Back- ground	CRDL (ug/L)	IDL (ug/L)	М
Aluminum			200		NR
Antimony			60	<del></del>	NR <sup>-</sup>
Arsenic			10		NR_
Barium			200		NR
Beryllium			5_		NR_
Cadmium_			5_		NR_
Calcium_			5000		NR_
Chromium_			10_		NR_
Cobalt			50_		NR_
Copper			25_		NR_
Lead			100		NR_ NR
Magnesium			5000		NR-
Manganese			15-	<del></del>	NR-
Mercury	254.00		0.2	0.2	cv-
Nickel -			40	~v.2	NR-
Potassium			5000		NR -
Selenium_			5		NR -
Silver			10		NR_
Sodium			5000		NR_
Thallium_			10		NR_
Vanadium_	}		50_		NR_
Zinc			20_		NR_
l					

omments:		
·		<u>.</u>
	· · · · · · · · · · · · · · · · · · ·	 
	· <del></del>	 

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

# ESD Central Regional Laboratory Data Tracking Form for Contract Samples

Data Set No:	CERCLIS No: //
Case No: 25/43	Site Name Location: Himed Dump
Contractor or EPA Lab: AATS	Data User: SF
No. of Samples: 6 Date	Sampled or Data Received: 12-17-96
of-custody record? Yes // N	lists been received? Yes Noacking list numbers written on the chain-
Are basic data forms in? Yes No of samples claimed: No	No
// 0	rult/ Date: 12-17-96
Received by LSSS: Synette	Burne & Date: 12-17-96
	Reviewer Signature: B. Spin
	2 Date review completed: 12-16-96
	urned Date: 12-29-96
Mailed to user by: A fuettu	Burney Date: 12-29-96
DATA USER: Please fill in the blanks belo Sylvia Griffen, Data mgmt	w and return this form to: . Coordinator, Region V, SSCRL
Data received by:	Date:
Data review received by:	Date:
Organic Data Complete [ ] S Dioxin Data Complete [ ] S	uitable for Intended Purpose [ ] / if OK uitable for Intended Purpose [ ] / if OK uitable for Intended Purpose [ ] / if OK uitable for Intended Purpose [ ] / if OK
PROBLEMS: Please indicate reasuses.	sons why data are not suitable for your
Received by Data Mgmt. Coordina	tor for Files. Data:

United States Contr	Environmental Protection had ncy act Laboratory Program	/& Chain of	Traffic Luport Custody Record	SAS No. (if applicable)	25/43
			anic CLP Analysis)		23/43
1 Project Code Account Code	2. Region No. Sampling Co.  5	4. Qate Shipped Carr	oul Ex	6. Matrix (Enter	7. Preservative (Enter
Regional Information	Sampler (Name)	Airbill Number		in Column A)	in Column D)
FAX	Luanne Vanderpoo	1225436	5146	Surface Water     Ground Water	1. HCl 2. HNO3
Non-Superfund Program	Sampler Signature V	5, Ship To	Analytical Tich Serv.	3. Leuchate 4. Field QC 5. Soil/Sediment	3. NaOH 4. H <sub>2</sub> SO <sub>4</sub> 5. K <sub>2</sub> CR <sub>2</sub> O <sub>7</sub>
Site Name	3. Purpose Early Action Long Term	1700 W ALL	any Sita	6. Oil (High only)	6. Ice only
HIM CO DUMP	SF PA REM STRD	Booten An	any, Shite C www.OK 74012	7. Waste (High only)	7. Other (specify in Column D)
City, State Spill ID Site Spill ID 45	PRP RI RA ST SI O&		•	8. Other (specify In Column A)	N. Not preserved
CLP A B C Sample Numbers (from Box 6) Med Corp./ Grab	D E - RAS Analysis	Regional Specific Tracking Number or Tag Numbers	G Station - Mo Location Yea Identifier Sa	H Corresponding CLP Organic Sample No.	Sampler Field QC Initials B = Harris S = Spike D = Explicate H = High partie F = Perferrit End
MEAKNZ 2 L G	عوسن واوج المنظ والملا بخانية المهدر الإلالة التالي بالمناكب	-153684	WT105A III3	16/1330 EAXX9	XV
MENKN3 2 L G		153689		16/1330 EAXYO	XV
HEARNY 2 L 6		153694	WTMA-D 4/13/	76/1339 EAXY ]	XV D
MEAKNS 2 1 G		153699	WTOGA WAS	16/1447 EAXYZ	XU
MEAKNG 4 L G	2 / 5-	153704	Field Black 11/13/		XU B
MEAKN72 4 G		153715-16	WTIS A 11/31	16/1535 EAXYY	2U
		7		•	
			·		
Complete? (YYN)	ample(s) to be Used for Laboratory MEAKN7	QC Additional S	Sampler Sign <b>atures</b>	Chain of Custody	Seal Number(s) - 47335
		CHAIN OF CUSTOD	Y RECORD		
Relinquished by: (Signature)	Date / Time Received by; (Sig	nature) Relin	iquished by: (Signature)	Date / Time Receive	d by: (Signature)
Luam Valeral 11/4	1/96 1600		·		(
Relinquished by: (Signature)	Date / Time Received by: (Sig	nature) Retir	nquished by: (Signature)	Date / Time Receive	id by: (Signature)
9.1					
Relinquished by: (Signature)	Date / Time Received for Labo (Signature)	oratory by:	Date / Time Remarks Is c	stody seal intact? Y/N/n	one
	(Signature)				

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'SEE REVERSE FOR PURPOSE CODE DEFINITIONS

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Organic Traffic Report  United States Environmental Protection Agency  Organic Traffic Report  Case No.											
WEP/	United States Cor	a Environmental Protein atract Laboratory Prog	ram	& Chair (For	n <b>of Custody Re</b> Organic CLP Analysis	cord	25	14	3		
1. Project Code	Account Code	2. Region No. S	Sampling Co.	4. Date Shipped	Carrier	·	6. Ma	itrix			servative
97		5	USEPA	11/14/96	FUEX			nter Column	A)		ter in lumn D)
Regional Information		Sampler (Name		Airbill Number	2 0			Surface		1 +	
FAX		Lionne ()	anderpool	5 Ship To	365/13			Ground Leachat			HNO3 NaHSO4
Non-Superfund Progra	amı	Sampler Signat	Letter		In Laboratoria	is Inc		Field Q( Soil/Sed	_		12SQ4 ce unly
		3 Purpose* E	arty Action Long Term  CLEM Action	)	Lerry Dr		6.	Oil (Higl Waste		6 0	Other Spacify in
Site Name		read SF	PA FS REM RD			(113. 3.	ĺ	(High or Other (S		(	Cólumó D) 📗
HIMCO DU City, State	Site Spill ID	PRP ST	RIRA	1	City, UT8	1123		in Colur		l .	Not preserved
ElKhert, IN	45		SI O&M ESI NPLD	ATTN SC	tt Sauls	T	L			L	
CLP A Matrix	B C Conc. Sample Pr			nal Specific	Station	Mo/Day		Corresp		Sampler	Field QC
Sample (from 1)	Med Comp	from 4 4 8	High racki	ng Number g Numbers	Location Identifier	Year/Tin Sample	9	CLP Inc		Initials	Qualifier  B - Blank S - Spike  D Displicate  R - Rinsate
(from Offier	High Grab B	ative from a V B A C C C C C C C C C C C C C C C C C C	RO/			Collection	on				PE - Perform Eval — : Not a QC Sample
10110 4	16	7 // 151	5-15367	8-79	7. Blank	11/12/16/13	-UU	NA		10	$ \rho$
EAXX9 2		$\frac{1}{1}$	5-15-36 \$		WT105A	11/13/96/	1			XV	B
EAXX9 2	,	$\frac{1}{5}$	5-15368		WT105 A	V113AC11	1	MEAK		1v	
EAXYO 2	4	$\frac{1}{1} \times \frac{1}{1} = \frac{1}{1}$	5-15368		WTILLA	11/3/16/		•		ZV	
EAXYO 2	1		5-15-36 8		WTILLA	11/13/76/1				31	
EAXYI 2	/-	/ X .	5-15369	0-71	WTHIAD	11/13/2				XV	Δ
EAXY1 2	1	5 X	515369	2-73	WTHAD	11/13/96/1	3a	MEAK	N4.	XV	$\underline{\underline{b}}$
FAXY2 2		.1 X	5-153675	-16	WT/06A	4/13/16/	1447	MERI	SN2	111	
EAXY3 2	4	<i>L</i> X	5-153200	•	Field Blank	11/13/16/1				10	B
EAXYY 2	4	L[X]	5-1537.05 Ised for Laboratory QC		WT/15 A ional Sampler Signature	11/13/96/	535	MEAK	<u>N</u> 7	Seal Numb	
Shipment for Case Complete? (Y/N)	Page 1 of 2	·	•	Addill	onar Sampler Signature	76		Unain or			_
\	01	EAXY"		CHAIN OF CUS	STODY RECORD			1_/_	マンイ	¥-7/	333
Relinquished by: (Sig	gnature)	Date / Time	Received by: (Signa		Relinquished by: (Sign	nature)	Date /	Time	Received	by: (Sigi	nature)
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Relinquished by: (Signature)	<del></del>	Date / Time	Received by: (Signa	nture)	Relinquished by: (Sigi	nature)	Date /	Time	Received	by: (Sig.	nature)
(-,-		1		,			1	÷			
		Data (Tono	Received for Labora	ton, but	B/T	Do-sala 1					
Relinquished by: (Signature)	gnature)	Date / Time	(Signature)	tory by.	Date / Time	Remarks Is c	neroay s	seal Intaci	t? Y/N/no	ne	

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&C	P	4		Contract L	.abor	alory	Prog	ram	•	& (	(For	of Orga	Traffic Rem Custody a nic CLP Analysi	cord	SAS I			25/	75
1. Project Code		Accoun	t Code		Heg 2 mple	<u> </u>		45,	ing Co. EPA	4. Date S 1//// ( Airbill Nui		Carri	ed Ex			atrix Inter Colu <b>m</b> r	n A)	(Er	iservative iter in lumn D)
FAX Non-Superfund Site Name  NIMIO City, State  Elichact I	Progra		<del></del>	\( \( \) \	ignple LAC Purp	nn P er Signose	U gne	a No lure	Long-Term Long-Term Action FS EM RD RA O&M	286 5. Ship to Data 960 W Satt	hen Lake	n Li royl Crt	aboratorie fy, UT 8 Saulls	onTic	2. 3. 4. 5. 6. 7.	Surface Ground Leacha Field Q Soil/Se Oll (High Waste) (High o Other ( in Colu	Water te C diment jh only) inly) Specify	2. 1 3. 1 4. 1 5. 1 6. 0	HCI HNO3 NaHSO4 H2SO4 ce only Other (Specify in Column D) Not preserved
CLP Sample `lumbers (from	Α	Low	C Sample Type: Comp./ Grab	D Preservative (from Box 7)	<del>                                     </del>	AS A	2 7	rsis High only ARO/ TOX	Trackii	F nal Specific ng Numbe g Numbers	r		G Station Location Identifier	H Mo/Da Year/Ti Samp Collect	me le	CLP In	l ponding lorganic ple No.	J Sampler Initials	K Field QC Qualifier B = Blant S = Spine D + Duplicate R = Renant PE = Reform Evel = Not a QC Sample
EAXY5	2	L	6	_1_	X				5-15371	フ-18			WTII6A	11/13/96	/1655	N.	N .	RU	
									for the same	2.1									
Shipment for C		1	age of A	1	ple(s	i) to	be (	Jsed (	or Laboratory Q0				Sampler Signatui	res		Chain of	Custody	Seal Num	ber(s) 3.3.3
Relinquished t			1	يد البد	te / 1			Rec	eived by: (Signa		F CUS		Y RECORD quished by: (Signature)	gnature)	Date	/ Time		d by: (Sig	
YM/un Va. Relinquished I	Dy: (Si	<u>A</u> gnature	<del>9</del> )	// <i>//////</i> /Da	<u>t 1/</u> ite /			Rec	eived by: (Signa	iture)	the state succession	Relin	iquished by: <i>(Si</i>	gnature)	Date	/ Time	Receive	d by: (Sig	gnature)
Relinquished	by: <i>(Si</i>	gnature	9)	Da	īe /	ime			eived for Labora gnature)	tory by			Date / Time	Remarks is	custody	seal intac	ct? Y/N/ne	one	
					<b>.</b>	*		Diak	SMO CODY				PA Form 9110-2	REE	REVERS	FOR ADI	DITIONAL	TANDARD	INSTRUCTION

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363888

<b>SEPA</b>	United States Env Contract	vironmental Prote Laboratory Prog	ection Agency gram	& Chain o	c Traffic Report Custody Regards CLP Analysis	cord	SAS No if applicable)		2514/3
1. Project Code  Regional Information  FAX  Non-Superfund Program  Site Name  HIMO DUMP	Sampler (Name (A fin ne ) Sampler Signa (A fin ne ) B. Purpose (Sampler Signa (Sampler Signa (Sa	USEPA landerpool	14. Date Shipped Ca 11/14/96 Airbill Number 285436 5. Ship To Data Chem 1960 W Le	arrier Fed Ex 65124 Laboratories	6. Matrix (Enter in Column  1. Surface 2. Ground 3. Leacha 4. Field Q 5. Soil/Se 6. Oil (Hig 7. Waste (High o 8. Other (	Water I Water Ite IC Idiment Igh only) Only) (Specify	7. Preservative (Enter in Column D)  1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. Other (Specify in Column D) N. Not		
Elkhart, IN 4	Soll ID  C Sample Prese Valive (from Box 7 Giner)  Grab  5  5  5  5  5  6  5  6  7  6  7  7  7  7  7  7  7  7  7  7	VOA NOA BNA BNA Pest POB	High Trackle	Final Specific ing Number g Numbers	Station Location Identifier  WT106A  Filld Blank WT/15A	H Mo/Day/ Year/Time Sample Collection	CLP Ir Sam	I sponding norganic ple No.	J K Sampler Initials  Reference Research PE-Reference Represence Repidence Represence Represence Represence Represence Represence Re
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SEE REVERSE FOR PURPOSE CODE DEFINITION 3638 3

	s Environmental Protec gency ntract Laboratory Program	ganic Traff & Cnain of Custo (For Inorganic CLF	oay Record	SAS No. (if applicable)	25/43
1. Project Code Account Code  ( Hegional Information	2 Region No Sampling Co 5 US FA	4 Date Shipped Carrier  11/14/16 Foil Arbill Number	5	6 Matrix (Enter in Column A)	7 Preservative (Unler
Non Superfund Program  Site Name  HIM ODUMP  City, State  Elkhort, IN  45	Sampler Signature  3 Purpose Ead Action CLEM Action CLEM Action FS REM RA PRP RI ST SI O&M FED ESI NPLD	American Analy 1700 W Albany, Broken Arrow, O	suite C K 74012	<ol> <li>Surface Water</li> <li>Ground Water</li> <li>Leachate</li> <li>Field QC</li> <li>Soil/Sediment</li> <li>Oil (High only)</li> <li>Waste (High only)</li> <li>World (Specify in Column A)</li> </ol>	1 HCI 2 HHO3 3 NaOH 4 H2SO4 5 K2CR2O7 6 Ice only 7 Other (specify in Column D) N Not preserved
CLP A Matrix Numbers (from Box 6) Iabels)  CLP A Matrix (from How Comp Grab	/ (trom Box 2) Oyande Reis Mos Novande PH Phonde	F Regional Specific Tracking Number or Tag Numbers	G H Station Mo/E Location Year/ Identifier Sam Collect	Day/ Corresponding Time CLP Organic sple Sample No	J K Sampler Field QC Qualifier B Blum S Spike D Depicate H Finance H Perform Evel H a QC Sumple
MEAKN2 2 L G MEAKN3 2 L G MEAKNY 2 L G	2 / 5-1	15 3 6 8 9	WT111A 11/13/9	6/1330 EAXX9	XV XV
11EAKN 5 2 1 6 MEAKN 6 4 1 6	2 V 5-1	153699	WTIOGA WAR	6/1339 EAXY 1 6/1447 EAXY 2 4/1530 EAXY 3	XV D XV B
MEAKN 7 2 4 6	3 / 5 /	53715-16	WT115 A 11/13/90	\$/1535 EAXY4	KU
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DISTRIBUTION:

Green - Region Copy
White - Lab Copy for Return to Region
Yellow - Lab Copy for Return to SMO

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS SEE REVERSE FOR PURPOSE CODE DEFINITIONS

# Well ID: <u>W T// 6 A</u> Station #: GROUND-WATER SAMPLING RECORD Facility Name: HIM (O DUMP Date: / / Well Depth: 1'1.3 1- Depth to Water: 8.03 Well Diameter: 2 Casing Material.: Volume Of Water per Well Volume: 1/12 Sampling Crew: Balla-i, Valugal, Duwelius, Type of Pump: Fu 1+7 Tubing Material: Pump set at ft. Weather Conditions: NOTES: GROUND WATER SAMPLING PARAMETERS (others 10%) S.C. Water Volume Pumping D.O. Temp. t, a Eh Turbidity <u>Time</u> Level <u>Pumped</u> Rate (mgg) (°C) $(m \mathcal{L}cm)$ pΗ (mV)(NTU) Sle 1/2 3.19 8.46 3070 7.14 02 12' 2 0.45 10.01 3100 7.12 Pump off at 1604 Filtered: Y or N Filter Size: \_\_\_\_\_:m Filter Capacity: \_\_\_\_\_ Brand: \_\_\_\_\_ Sampled at: Parameters taken with : Sample delievered to \_\_\_\_\_\_ by \_\_\_\_\_ at \_\_\_\_. Sample CRL #: OTR #: ITR #: SAS #: Number of Bottles Parameters Collected Bottle Lot Number

VOA'S EAXY 5

SVOC'S

Metals

A1134020 - Not collected to the collected to

After Igallon had to lower pump Pump off 1548 Pump off at 1604

# **GROUND-WATER SAMPLING RECORD** Well ID: WT115A Station #:\_\_\_\_ Facility Name: Him co Dump Date: \_\_\_/ Well Depth: 19.22 Depth to Water: 14.75 Well Diameter: 2 Casing Material.: PVC Volume Of Water per Well Volume: . 8 1 Type of Pump: Fult2 Tubing Material: Pump set at 17 ft. Weather Conditions: NOTES: **GROUND-WATER SAMPLING PARAMETERS** Water Volume **Pumping** D.O. Temp. S.C. Turbidity Eh Time $(^{\circ}C)$ Level **Pumped** Rate (ppm) $(m \mathcal{L}cm)$ ŊΗ (mV)(NTU) 3.25 11.97 1.422 6.8 14.87 2,5 3.28 14.91 4.0 6.0 SAMPLE AOV 3:40 SVOC METALS Filter Size: \_\_\_\_\_ :m Filter Capacity: \_\_\_\_\_ Brand: \_\_\_\_ Filtered: Y or (N) Parameters taken with: Hydrolch Scout 2 Sampled at: Sample delievered to \_\_\_\_\_\_ by \_\_\_\_\_\_ at \_\_\_\_\_. Sample CRL #: \_\_\_\_ OTR #: \_\_\_\_ ITR #: \_\_\_\_ SAS #: \_\_\_\_ Parameters Collected Number of Bottles Bottle Lot Number

HSD

EAXY4 MEAKNI

VOA's SVOC's Metals

(	GROU!	ND-WAT	ER SAMI	PLING R	ECORD			Well [D:_ Station ≠:_	ر تام	OLA
]	Facility	Name:	Hima	Dur	-1P			Da	te: <u> </u>	3 196
,	Well Dept	th: 18,48	Depth	to Water: 1	، اح	Well Diamet	er: 2 "			
(	Casing Ma	aterial.:	55 V	olume Of W	/ater per W	ell Volume:	1.19	<del></del> -		
5	Sampling	Crew: R.	Dowelin	us .T. K	اذااعربها	y A	Baux	nann		
					-	Teston			(A.5	ft
						NOT				
	··· cutifici C	onditions		1100						
-				·						
				GROUND-\	WATER SA	MPLING P.	ARAMETE	RS	_	
	Time	Water Level	Volume <u>Pumped</u>	Pumping <u>Rate</u>	D.O. (ppm)	Temp. <u>(°C)</u>	S.C.	pН	Æh (mV)	Turbidity (NTU)
Time	1418				188		(mac em)	<del></del>		<u> </u>
	420	11.21	1		1.81	10.9	906	7.13		Red Colo
	422	11,20	2.5		_	11.36		_		Rad Colo
_	429	11.50	<u>5</u>			1(.4)				00 €
_	431		8			11.41		-		<u>98,5</u> 37,4
-	434	X120	10		),24 Z8	11,50	977			21,3
-	437	11.21	12		1,27		973			11,70
_	441	11,21	14		1,20	N:44				5.6
_	446	11,21	16		1.18	11.45	982	7.17		4.88
1	453	11.21			1.19	11.5	987	7.16		2.79
	1454	Pump	Off_	<del></del> .			<del></del>			
		Y or N				Filter Cap				
5	Sampled a	ıt:		Parame	ters taken v	vith: Hy	grolab			
						_ by <b>R.D</b>				
(	Sample C	DI #·		OTR #-		ITR #		SAS =		

Number of Bottles

2

Z

Bottle Lot Number

B4206030

A1134020 C3156040

EAXY2 MEAXN3

Parameters Collected

VOA's

SVOC's Metals

# GROUND-WATER SAMPLING RECORD

MEAXNZ MEAKNY

GROU	ND-WAT	ER SAM	PLING R		Well ID: <u>W T111A</u> Station =:					
Facility	Name: 📙	IMco	Dur	1P			Da	te: <u> </u>	13/96	
Well Dep	oth: <u>21.14</u>	+ Depth	to Water:					1: (	=	
Casing N	faterial.:		olume Of W	ater per W	'ell Volume:	1.18				
Sampling	g Crew:		<b>.</b>		,,		·			
Type of I	oump:		Tubir	ng Material		I	Pump set at		tì.	
Weather	Conditions:_				NOT	ES:	······································			
			GROUND-V	VATER SA	AMPLING P	ARAMETE	RS			
<u>Time</u> 1:04pm	Water <u>Level</u>	Volume <u>Pumped</u>	Pumping <u>Rate</u>	D.O. (ppm)	Temp. (°C)	S.C. (m/cm)	Нg	er Er (mV)	Turbidity (NTU)	
1:23	14.75	3.0	اس	.58	12.39	114	5.7		4.05	ph 5
1.247	14.77	40		<u>.50</u>	<u> यनि</u>	115_	<u> 5.67</u>	<del></del>	3.10	
1:41		) oft.		_ <del>55</del>	_ <del>15.41</del>	-43	<del>-513</del>		طامه	
								<del></del>		
		<del></del>							<del></del>	
							<del></del>			
			-							
Filtered:	Y or N	Filter S	Size:	:m	Filter Cap	acity:	В	irand:		
Sampled	at:		Parame	ters taken v	with :				*	
Sample d	elievered to				by	·-·	·	at		
Sample C	RL #:		OTR #:	<del></del>	ITR #:	· · · · · · · · · · · · · · · · · · ·	SAS #:	· · · · · · · · · · · · · · · · · · ·		
<u>Paramete</u>	rs Collected				Num	ber of Bottle	es B	Sottle Lot N	<u>lumber</u>	
VOA's SVOC's					2	<del>, </del>	 	21085	630	
Metals					کے ا	<del>)                                    </del>	_		16040	v
<b>7</b>	AYYO	1 1=1	λΧΥΙ		-	7-7-				•

starte

GROU	ND-WAT	ER SAMI	PLING R	ECORD			Well ID:_ Station #:_		
Facility	Name: <u>H</u>	IMCO	DUMP			,	Da	te: <u>/</u> /	13/96
Well Dep	th:17.89.+	167 Depth	to Water: /-	2.1	Well Diame	ter: 2 !'_			
	aterial.:						•		
		_							
	Crew: R				• ,			11	
					•		Pump set at	14	ft.
Weather (	Conditions:_	P. Cloy	dy, Flu	rries, la	NOT	TES:			
		·		· <del></del>					
			GROUND-1	WATER SA	MPLING P	ARAMETE	RS		
Time 1247	Water <u>Level</u>	Volume Pumped	Pumping <u>Rate</u>	D.O. (ppm)	Temp.	S.C. (m.£cm)	<u> H</u> q	Eh (mV)	Turbidity (NTU)
1249 Jump of	12.15	1.5		4.29	11.54	306	7.25		69.8
1252	12.15	3.0		4.54	11.45	307	7.69		35.5
1255	12.15	4		4.88	12,03		7.85		21.0
1257	12,15	5		5.04	12.08		7.87		9.30
1258'2	12.16	6		5.09	12.18	30Z	7.87		7.17
1300	12.16	7		5.07	12.26		7.89		3.54
1302	12.16	8	-112	5.12	12.18	304	1.89		.08
		•		<del></del>					
<del></del>									
		<del></del>	<del></del>				<del></del>		
							В		
Sampled a	at: 1302	<u></u>	Parame	eters taken v	vith :	ydrolal	, >		
Sample de	elievered to	L. Yank	erpool		_ by <b>R.D</b>	nwelivs		at	330
			•				SAS #:		
Parameter	rs Collected		<del>.</del> ,		Num	ber of Bottl	es B	ottle Lot N	umber
VOA's					_	2	B	40260	230
SVOC's					<del></del>	2_	<u> </u>	1085	030
Metals					_		<u> </u>	3156	040
EA	PXXI								
ME	AXN	2							

# GROUND-WATER SAMPLING RECORD

GROU	ND-WAT	ER SAMF	PLING R				77/F :	<u> </u>	
Facility	Name:/	Himac F	Jung				D	oate:/_	/
	oth:		•						
Casing M	laterial.:	V	olume Of W	ater per W	ell Volume:	·			
Sampling	g Crew:				,,		,		
Type of F	Pump:		Tubir	ig Material:			Pump set a	t	ft.
	Conditions:_								
		(	GROUND-V	VATER SA	MPLING F	PARAMETE	RS		
<u>Time</u>	Water <u>Level</u>	Volume <u>Pumped</u>	Pumping <u>Rate</u>	D.O. (ppm)	Temp. (°C)	S.C. (m.∉cm)	<u>pH</u>	EK (mV)	Turbidity (NTU)
	·			<del></del>			<del></del>		
	**								
		,					<del></del>		
								-	
	******		<del></del>						
		· · ·			<del></del>				
Filtered:	Y or N	Filter S	ize:	:m	Filter Cap	pacity:	<del></del>	Brand:	· · · · · · · · · · · · · · · · · · ·
Sampled :	at:15 00	<u> </u>	( ) Parame	ters taken v	vith :				
Sample de	elievered to	<del></del>			by			at	<del></del> ·
	CRL #:								
<u>Paramete</u>	rs Collected			<u> </u>	Nun	nber of Bottl	es	Bottle Lot N	
VOA's					_	2		B 420	603 o
SVOC's								· · · · · · · · · · · · · · · · · · ·	
Metals					_				

EAXX8

# GROUND-WATER SAMPLING RECORD

Well ID: F	12/01	ک در	, ,	į,	<u></u> ሉ.
Station #:					_

Facilny Name: <u>/</u> /	ing D	ump	<del></del>		D	Date: <u>// //3 / 9</u> 6			
Well Depth:	Depth	o Water:		Well Diame	eter:				
Casing Material.:	V	olume Of W	ater per W	ell Volume	:		,		
Sampling Crew: 11	- /11'		cho.d	,	Alen	,	LV		
Type of Pump: Ful									
Weather Conditions:_				NO	TES:				
		GROUND-V	VATER SA	MPLING I	PARAMETER			····	
Water	Volume	Pumping	D.O.	Temp.	S.C.		ÆΚ	Turbidity	
<u>Time</u> <u>Level</u>	<u>Pumped</u>	Rate	(ppm)	(°C)	(m \( \mathcal{L} \)cm)	pН	(mV)	(NTU)	
<u> </u>	<del></del>	-						<del></del>	
			<del></del>				7.7		
						<del></del>			
		<del></del>			<del></del>				
					<del></del>				
		<del></del>		<del></del>					
							<u></u>		
Filtered: Y or N	Filter S	Size:	:m	Filter Cap	pacity:	1	Brand:	··	
Sampled at: <u>15 3 0</u>		Parame	ters taken v	vith :					
Sample delievered to _				by	<u> </u>		at	,	
Sample CRL #:		OTR #:		_ ITR #:		_SAS #:_	<u>-</u> -		
Parameters Collected		·		Nun	nber of Bottles	i	Bottle Lot N	umber	
VOA's				_	2		BMBL	1206035	
SVOC's				_	2_		A1134	020	
Metals				_			C3156	040	
- 1 642					•				

EAXY3 MEAHN6

# Appendix I-i

Data Quality Evaluation Report for 1998 Supplemental Site Investigation

# DATA QUALITY EVALUATION REPORT 1998 SUPPLEMENTAL SITE INVESTIGATION/RISK ASSESSMENT

### 1 General

This section presents a data usability assessment for the soil, ground water, and soil vapor field samples collected during the Supplemental Site Investigation conducted October 12 through December 14, 1998. The soil and ground water samples were analyzed for the Target Compound List Volatiles and Semivolatiles and the Target Analyte List (23 metals plus cyanide) using USEPA Contract Laboratory Program Organic and Inorganic Routine Analytical Services. The soil vapor samples were analyzed using SW846 Method 5041A/8260B. Quality control (QC) checks were performed routinely during data collection and analysis to verify that the data collected are of appropriate quality for the intended data use and that the data quality objectives were met. One hundred percent of the soil and ground water analytical data and approximately fifty percent of the soil vapor analytical data received a full data validation using the National Functional Guidelines for Organic and Inorganic Data Review - EPA 540/R-94/012 and /013.

# 2 Sample Collection Quality Control

# 2.1 Field Duplicates

Field duplicates were collected at a rate of approximately 10% from all media sampled. For review purposes a limit of 50% Relative Percent Difference (RPD) was imposed on the data to evaluate the precision of sample collection. In general, precision was very good and only outliers are discussed below.

Soil - The duplicate pairs show excellent precision for the organic compounds and good precision for the inorganic analytes with the following exceptions. See Table1-1 for all soil duplicate sample RPDs.

-Location SB06-0.5: The cobalt RPD is 53% and the cyanide RPD is 100%. The RPD for cyanide is calculated on the prime field sample cyanide result of 0.3 mg/kg while the

duplicate is reported as less than 0.10 mg/kg.

-Location SB09-0.5: The calcium RPD is 152% and the magnesium RDP is 51%.

-Location SB10-0.5: All target analytes are below the fifty percent RPD except cyanide at 151%.

-Location SB16-6: The results from this location show consistency in the detections of polynuclear aromatic compounds between the prime sample and the duplicate with only two compounds slightly above the target RPD of fifty percent, benzo(b)fluoranthene and benzo(k)fluoranthene at 54% and 69%

respectively. Although there are several inorganic analytes above the RPD

of fifty percent (aluminum at 59%, barium at 55%, calcium at 70%, manganese at 88%, sodium at 53% and cyanide at 66%), none are significant enough to impact data usability.

**Ground Water -** The ground water field duplicates demonstrate excellent precision. The relative percent difference between pairs is predominantly in the range of ten to twenty percent. The greatest difference calculated is the lead result for one pair at 34 percent. See Table 1-2 for all ground water duplicate sample RPDs.

**Soil Vapor** - The duplicate pairs show excellent precision with the following exceptions. See Table 1-3 for all soil vapor duplicate sample RPDs.

-Location TT-14: The 1,1 dichloroethane RPD is greater than 100% and m, p-xylene RPD is

greater than 59%. Although these compounds have been correctly identified the concentration present must be considered estimated due to the variance

between samples.

-Location TT-26: Carbon disulfide RPD is 69% and the tetrachloroethene RPD is 59%.

-Location TT-39: Toluene has an RPD of 107% and the carbon disulfide RPD is 53%. The

concentrations of both compounds are near the reporting limits which may

explain the variability.

-Location TT-46: Carbon disulfide has an RPD of 71% and the toluene RPD is 128%. These

concentrations are also near their respective reporting limits which may

explain the variability.

# 2.2 Equipment Blanks

Equipment blank samples were collected by pouring purchased deionized water over the decontaminated equipment and capturing the run-off. These blank samples were always collected just prior to using the equipment at the referenced location.

**Soil** - Equipment blanks were not collected in support of soil sampling.

Ground Water - During the three day ground water sample collection activities two equipment rinse blanks were collected on separate days. See Table 1-4 for a summary of compounds detected. No volatile or semivolatile organic compounds were detected in either blank with the exception of bis (2-ethylhexyl)phthalate (BEHP) in one sample. BEHP was not detected in the accompanying field sample. Both of the blanks also contained inorganic analytes at low concentrations as described below.

The equipment blank collected prior to well WT115A sampling contained cyanide at 12.0  $\mu$ g/L J as compared to 12.4  $\mu$ g/L J in the ground water sample from this location. Zinc was also detected in the blank at 11.2  $\mu$ g/L J which is greater than the 3.7  $\mu$ g/L J reported in ground water sample. The zinc and cyanide results from this location have been flagged "UB".

Antimony, calcium, iron, selenium, sodium, and zinc were reported in the equipment blank collected prior to well WT119A sampling. Except for an antimony concentration of 45.4  $\mu$ g/L J in the blank, the impact to the sample data is negligible due to the low levels reported in the field sample. The antimony concentration in the sample is 43.2  $\mu$ g/L J sample. This result has been qualified "UB" since the concentration is less than five times that of the blank

**Soil Vapor -** Two equipment rinse blanks and two field blanks were collected during the course of the field sampling effort to evaluate the potential for influence on the subsurface samples from sampling equipment and ambient air. See Table 1-5 for a summary of the compounds detected in the ambient air and equipment rinse blanks.

The field blanks were collected by drawing ambient air through a clean sorbent tube at approximately the same flow rate as the field sample collection. The air did not have contact with any sampling equipment as it was drawn into the sorbent tube. Benzene, toluene, ethyl benzene, xylenes (BTEX), styrene, and carbon tetrachloride were present in both field blanks at comparable concentrations which may indicate that there is a source of these volatiles on site not necessarily associated with the subsurface soil vapor. Methylene chloride, acetone, and carbon disulfide were also present in either the field blanks or the equipment rinse blanks. It is not clear, based on the available data, if these compounds are site related or sampling/laboratory contamination. However, the common occurrence of these specific compounds in environmental media due to laboratory contamination makes site related presence extremely suspect.

The equipment blanks were collected after the field blanks by drawing ambient air through a complete sample collection assembly. BTEX, styrene and carbon tetrachloride were reported in both equipment rinse blanks. This is probably due to the presence of these compounds in the ambient air rather than on the equipment. Tetrachloroethene was reported in both equipment rinse blanks, one ambient air blank and neither of the field samples collected immediately after these blanks. It is not clear what the source of this compound is. However, based on these results the ambient air cannot be eliminated. Vinyl chloride was detected in one equipment blank. The field sample collected prior to this blank contained an elevated concentration of vinyl chloride (>70 µg/m³). Despite thorough decontamination it may be possible that the steel rod retained some vinyl chloride. The field sample that was collected with the same equipment immediately after the blank was nondetect for vinyl chloride as were the ambient air and the trip blank.

# 2.3 Sample Handling and Preservation

# 2.3.1 Chain of Custody and Cooler Receipt

No sample custody or cooler receipt problems were noted for the soil, ground water, or soil vapor samples.

# 2.3.2 Trip Blanks

Trip blanks accompanied every ground water and soil vapor sample submitted for analysis. The ground water trip blanks were prepared by the lab from analyte free water and shipped to the site with the clean sample containers. These blanks were then included with each cooler that contained water samples for volatile analysis.

For the soil gas samples an unopened sorbent tube was placed in the cooler on site and kept with the samples from the time of collection through shipment until receipt by the laboratory. The trip blank results are summarized in Table 1-6

Only the blanks that demonstrated contamination or encountered analytical problems are discussed. All others were reported as not having detectable levels of the target compounds.

Ground Water - The trip blanks for sampling dates 19, 20, and 21 October 1998 were analyzed just outside of the allowable holding time for preserved water volatiles. No compounds were detected and the results have been qualified "UJ". The trip blank that accompanied the 22 October 1998 cooler is unusable. The blank was analyzed beyond an acceptable holding time and the results have been qualified as "R".

The impact to the data quality from the trip blanks is negligible since the field samples did not demonstrate the presence of target compounds except 1,1 dichloroethane at estimated values in two samples.

**Soil Vapor** - The trip blank associated with sample locations TT-15, TT-17, TT-18 and TT-19 contained 16 ng of carbon disulfide and 43 ng of benzene. Because of these positive results for the trip blank the detection of 59 ng carbon disulfide and 44 ng of benzene at TT-15 are suspect.

The trip blank associated with sample locations TT-26, TT-27, TT-28, TT-29, TT-30, and TT-31 contained 11 ng of carbon disulfide. Therefore the carbon disulfide detections of 32 ng at TT-29, 20 ng at TT-30 and 22 ng at TT-31 are suspect based on the results of the trip blank.

The trip blank associated with sample locations TT-16, TT-32, TT-33, and TT-34 contained carbon disulfide at 7.3 ng, benzene at 37 ng, toluene at 7.6 ng, tetrachloroethene at 22 ng, m,p-xylenes at 14 ng and ethylbenzene at 6.5 ng. Hence, the detections of tetrachloroethene at 36 ng in sample TT-32 and xylene at 51 ng in sample TT-16 are suspect based on the results of the trip blank.

The trip blank associated with sample locations TT-35, TT-36, TT-37, and TT-38 contained benzene at 46 ng, toluene at 17 ng, and m,p-xylene at 16 ng. The toluene detections in all four samples are suspect based on the results of the trip blank.

The results for these samples have been qualified nondetect based on the National Functional Guideline that less than 5x the blank is not considered site related. The other samples in these groups do not require qualification since they were either nondetect or contained significant levels of the compounds in question. The high levels, may in fact, have attributed to the contamination of the trip blanks and accompanying samples that demonstrate low concentrations.

# 2.3.3 Sample Preservation

All samples were shipped in coolers that contained sufficient ice to maintain an internal temperature of 4 degrees C.

Water Samples for Metals and Cyanide Analysis - The water samples were properly preserved with nitric acid for metals and sodium hydroxide for cyanide except as noted here. Samples for metals analysis from locations WT102A, WT112A, WT114A, and WT116A demonstrated a pH of three rather than less than two when checked by the laboratory. The detections for these samples have been qualified as estimated "J" and the nondetects have been qualified as "UJ".

Water Samples for Volatile Analysis - All water samples were properly preserved with hydrochloric acid to a pH of less than two.

### 2.3.4 Holding Times

Holding times were generally met for the extraction and/or analysis of all soil, ground water and soil vapor samples. Only the exceptions are noted here.

The semivolatile samples from monitoring wells WT101A and WT115A were re-extracted outside primary holding time. The results have been qualified as "UJ" and are biased low. This affects only a subset of the target list since the initial extraction results are usable except for those results qualified "R".

Several water volatile trip blanks were analyzed outside holding times as indicated in the trip blank discussion.

# 3 Laboratory Control

### 3.1 Method Control

#### 3.1.1 Soil and Ground Water

This section presents an overview of the data validation performed by US EPA-Region 5 contractors using the National Functional Guidelines for Inorganic and Organic Data Review. The data is generally usable except as noted here. Complete details can be found in the validation narratives provided in this appendix.

### 3.1.1.1 Instrument Calibration

**Volatiles -** Numerous instances of continuing calibration whose corresponding initial calibration has percent relative standard deviations outside primary criteria and continuing calibration with percent difference outside criteria are noted. The detections have been qualified "J" and the nondetections qualified as "UJ".

**Semivolatiles -** Numerous instances of continuing calibration whose corresponding initial calibration has percent relative standard deviations outside primary criteria and continuing calibration with percent difference outside criteria are noted. The detections have been qualified "J" and the nondetections qualified as "UJ".

**Metals** - No problems are noted.

# 3.1.1.2 Laboratory Control Samples

No problems are noted.

# 3.1.1.3 Method Blanks

Volatiles - Where methylene chloride, acetone and 2-butanone are detected in the method blank, the accompanying samples are qualified "U" if the sample result is less than ten times the blank concentration.

Semivolatiles - Where pyrene is detected in the method blank the accompanying sample is qualified

"U" if the sample result is less than five times the blank concentration.

Where bis(2-ethylhexyl)phthalate is detected in the method blank the accompanying samples are qualified "U" if the sample results are less than ten times the blank concentration.

Metals - No serious blank problems were noted. Where calibration or preparation blanks contain low concentrations of analytes above the instrument detection limit the sample results are qualified "J" for the detections. No qualification is necessary for the nondetections.

# 3.1.1.4 Laboratory Duplicates

No problems are noted

# 3.1.2 Soil Vapor

This section presents a overview of the data validation performed by US EPA-Region 5 contractors using the National Functional Guidelines for Organic Data Review. The data is usable as noted here. Complete details can be found in the validation narratives provided in this appendix.

#### 3.1.2.1 Instrument Calibration

No problems were noted.

# 3.1.2.2 Laboratory Control Samples

No problems were noted.

### 3.1.2.3 Method Blanks

Bromomethane was the only compound detected in any of the method blanks. The only impact is to sample 7704 from location TT-42. The bromomethane detected at 14 ng is qualified "U".

# 3.2 Sample Control

### 3.2.1 Surrogate and Internal Standard Recoveries

# 3.2.1.1 Soil and Ground Water

**Volatiles** - There are a few instances of poor internal standard and surrogate standard recovery. Sample ECMN7 detections are qualified "J" and nondetections are qualified "UJ" except in the case



of a few compounds whose recoveries are outside expanded acceptable limits. These nondetections are unusable and are qualified "R".

Semivolatiles - There are a few instances of poor internal standard and surrogate recovery. Multiple compounds in the samples ECMQ2, ECMQ2RE, ECMM5 are qualified "J" for detections, "UJ" for nondetections except in the case of a few compounds whose recoveries are outside expanded acceptable limits. These nondetections are unusable and are qualified "R".

# 3.2.1.2 Soil Vapor

The recovery of 4-bromofluorobenzene in the sample from TT-28 was above the upper QC limit. The positive results for this sample should be considered estimated.

The recovery of 1,2,-dichloroethane-d4 in samples from TT-36, TT-37, and TT-38 exceed the upper QC limit. The positive results for these samples should be considered estimated. The recovery of 4-Bromofluorobenzene in the sample from TT-37 exceeds the upper QC limit. Since the positive results from this location are already qualified, no additional qualification is necessary.

# 3.2.2 Matrix Spike/Matrix Spike Duplicates

Matrix Spikes and Spike Duplicates are not applicable to the sorbent cartridges used to collect the soil vapor samples. The following discussion applies to soil and ground water samples only.

Volatiles - No problems are noted.

Semivolatiles - Where the relative percent difference between the matrix spike and spike duplicate compounds are outside criteria the samples are qualified "J".

Metals - Where the matrix spike recoveries are low the samples are qualified "J" for the detections and "UJ" for those analytes not detected except for the selenium results for samples collected from WT101A, WT101A Dup, WT115A, and WT116A. The selenium spike recovery for these samples was extremely low, at 26%, giving unusable results. The data has been qualified ""R...

# 3.2.3 Method of Standard Additions (MSA) Analyses (Inorganic)

Several soil sample arsenic and lead results and two water lead results are qualified "J" because incorrect spike amounts were used.

# 3.2.4 Additional Soil Vapor Analysis Information

Concentrations That Exceed The Calibration Range - The following samples contain target analytes at concentrations that exceed the calibration range. The collection and analysis method does not provide for reanalysis of these samples. All applicable results have been qualified "E".

- -The value for tetrachloroethene in samples from locations TT-29, TT-39 & Duplicate, and TT-22 are qualified "E".
- -The values for tetrachloroethene and trichloroethene in samples from locations TT-40 and TT-26 are qualified "E".
- -The value for vinyl chloride in the sample from location TT-26 is qualified "E".
- -The value for trichloroethane in the sample from location TT-45 is qualified "E".

# 3.2.5 Compound Identification

1,2-Dichloroethane should not have been reported for the sample from TT-32 because the submitted mass spectrum indicates a cycloalkane. The value has been qualified "U".

#### 4 Conclusions

# 4.1 Data Adequacy

The data met the data quality objectives for precision, accuracy, representativeness, comparability and completeness and is adequate for it's intended use except for sensitivity. Review of the sample handling and analysis shows that the sample quality has not been negatively impacted by field or lab procedures. Qualifiers have been applied to the results to convey limitations of the analytical results. The qualifiers used are defined in Table 3-4. There are a few instances where data is unusable and those are qualified as rejected "R".

#### 4.2 Restrictions on Data Use

The only notable data restriction observed for the soil and ground water data is that the Contract Laboratory Program contract required quantitation limits used for this work exceed the risk based screening levels for many compounds. Because of this restriction, the presence or absence of these compounds above the screening criteria cannot be definitively determined.

More sensitive methods are readily available and are recommended for any future sampling and analysis. The data quality objective process will ensure the chemical data meets the project needs.

**Quality Control Summary Tables** 1998 Supplemental Site Investigation

Table 1-.

Relative Percent Differences in Soil Duplicate Samples - Fall 1998

Himco Dump Superfund Site

Elkhart, Indiana

Sample location	SB06-0			Maria 100 \$B09-0.5			\$810-0.5			SB16-8		
	Result		RPD	Result	ໜ-ບ.ວ Result	RPD	Result	ru-u.5 Result	RPD	Result	B16-0 Decuit	RPD
TOTAL METALS (mg/kg)	25. Mart I 100 (01 %) 25. 100 C.	- I WOODIT	- 10 O	1103011	1103011	TO D	A MAN LYOPON AND AND AND AND AND AND AND AND AND AN	and the suite of	s Safeti M. Dod	Vegair	Kesuit	RESERVED.
Aluminum	4220	3000	34	2480	2500	33.8	4230	5670	29.1	4820	8860	1 59.1
Arsenic	2.1	1.4	40	1.1	1.7	43	1.5	1.4	6.9	4.7	5.5	16
Barium	51.8	47.7	8.2	14.1	13.4	5.09	51.7	55.1	6 37	54.3	95.7	55.2
Beryllium	<	<	0	<	<	0.0	<	<	0.0	0.80	0.90	12
Calcium	1750	1660	5.3	19600	2650	152	586	710	19.1	41200	85900	70.3
Chromium	4.5	5.5	20	5.7	5.4	5.4	5.5	7.0	24	13.1	11.3	14.8
Cobalt	3.3	1.9	84	3.1	2.8	10	3.4	3.3	3.0	3.8	<	NC
Copper	20 4	19.9	2.48	9.2	9.1	1.1	35.1	37.2	5.81	18.3	18.9	3.23
fron	6200	4800	25	4750	4610	2.99	4780	5330	10.9	10800	16600	42.3
Lead	13.4	17.2	24.8	6.7	6.7	0.0	21.1	28.9	31.2	28.2	26.6	5.84
Magnesium	746	598	22.0	2380	1410	51.2.	559	766	31.2	5460	7860	36.0
Manganese	337	296	13.0	172	144	17.7	317	319	0.63	228	588	88,2
Nickel	9.6	7.0	31	7.0	9.5	30	8.1	8.1	0.03	11.8	12.1	
Potassium	219	<	NC	264	9.5 <	NC	, 0.1 <b>(</b> <	297	NC	283	450	2.51 45.6
Selenium	< <	<	00	<	<	0	\	<	0.0	1.4	1.3	45.6 7.4
Sodium	24.8	<	NC	36.2	37.6	3.79	34.3	45.5	28.1	219	1.3 378	53.3
Vanadium	24.6 8.5	7.0	19	7.2	8.8	20	10.1	10.4	2.93	21 <del>9</del>	15.1	NC
Zinc	52.3	45.0	15.0	26.2	22.2	16.5	58.3	68.9	16.7	78.0	78.6	0.766
	52.3 0.30	45.0 <		0.56	0.37		4.2	0.58	(3) 151 F	1.0	7 o.b 0.50	
Cyanide	0.30		100.0	0.56	1 0.37	41	4.2	0.36	1012	1.0	0.50	67
VOLATILES (μg/kg)							}					
1,1-Dichloroethane	<	<	0	<	<	0	<	<	0	1	2	67
Benzene	<	<	0	<	<	0	<	<	0	3	4	29
Ethylbenzene	<	<	0	<	<	0	<	<	0	12	14	15
Xylene (total)	<	<	0	<	<	0	<	<	0	7	9	25
SEMIVOLATILES (μg/kg)												
1.2-Dichlorobenzene	<	<	0	<	<	0	(	<	0	98	63	43
Naphthalene	<	<	o l	<	. <	Ö	<	<	ō	120	130	8.0
Diethylphthalate	<	<	ő	<	<	o l	<b> </b>	<	o	64	46	33
Phenanthrene	<	<	o l	<	<	0	<	<	0	270	250	7.7
Anthracene	<	<	0	<	<	0	<	<	0	53	57	7.3
Pyrene	<	<	0	<	<	0	<	<	o	670	610	9.4
Benzo(a)anthracene	<	<	0	<	<	0	<	<	0	400	350	13
Chrysene	<	<	ō	<	<	0	<	<	0	450	400	12
bis(2-Ethylhexyl)phthalate	<	<	ő	440	470	6.6	140	150	6.9	270	120	77
Di-n-octylphthalate	<	<	Ö	<	<	0	56	70	22	<	<	0.0
Benzo(b)fluoranthene	<	<	ő	<	<	o I	<	<	0	750	430	<b>4.54</b>
Benzo(k)fluoranthene	<	<	0	<	<	o	<	<	o	900	440	69
Benzo(a)pyrene	<	<	0	<	<	0	<	<	o o	530	450	16
Indeno(1,2,3-cd)pyrene	<	<	0	<	<	0	<	<	0	380	360	5.4
Dibenz(a,h)anthracene	<	<	0	<	<	0	<u> </u>	<	0	160	150	6.5
Benzo(g,h,i)perylene	<	250	NC	<u> </u>	<	0	<	<	0	280	250	11

Table 1-2
Relative Percent Differences In Ground Water Duplicate Samples - Fall 1998
Himco Dump Superfund Site
Elkhart, Indiana

Sample location		WT101A µg/L			WT119A ♣ µg/L	4.888 1 C
	Result	Result	* RPD	Result	Result	RPD
TOTAL METALS		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Medical Confession of the Same	
Aluminum	<	<	0.0	258	249	3.55
Arsenic	3.6	3.3	8.7	5.8	5.3	9.0
Barium	91.2	85.5	6.45	78.3	76.0	2.98
Calcium	377000	361000	4.3	143000	142000	0.70
Chromium	13.1	11.3	14.8	7.8	. <	NC
Copper	<	<	0.0	5.4	4.9	9.7
Iron	28100	26900	4.36	1690	1690	0.0
Lead	<	<	0.0	3.4	2.4	34
Magnesium	14700	13900	5.59	44800	44500	0.672
Manganese	3080	2940	4.65	279	278	0.359
Potassium	3630	3630	0.00	11500	11200	2.64
Selenium	3.0	3.0	0.0	6.0	6.0	0.0
Sodium	35800	33100	7.84	69100	68200	1.31
Cyanide	17.9	14.4	21.7	12.0	15.2	23.5
SEMIVOLATILES		<del></del>			-	
Diethylphthalate	19	9	71,0	<	<	0

Table 1-3 Relative Percent Differences in Soil Gas Duplicate Samples - Fall 1998 Himco Dump Superfund Site Elkhart, Indiana

Sample Location sale	Victoria de la companya de la compa	TT-14	ek a antenet et	radiosiles in entre	TT-26		The Land	TT-39	North Carlott Lord	Denata Bro il	TY 40	S. aurekeelt Jalioon
				file cont	11-20			11-38	Disa		TT-46	
								. History		aut.		7.
Established for the second	Result	Result	RPD	Result	Result	RPD	Result	Result :	RPD	Result	Result	RPD
Analyte												
Vinyl Chloride	77	100	26	22000	23000	4	<	<	0	<	<	1 0 1
Bromomethane	1.0	<	NC	<	<	0	<	<	0	<	<	1 0 1
Chloroethane	36	<	NC	<	<	0	<	<	0	<	<	
1,1-Dichloroethene	6.8	<	NC	310	<	NC	<	<	0	<	<	0
Carbon Disulfide	86	132	42	3000.00	6300	71	0.45	0.26	52	1.4	0.63	74
Acetone	<	<	0	<	<	0	<	<	0	2.3	<	NC
Methylene Chloride	6.8	<	NC	<	<	0	<	<	0	<	<	0
trans-1,2-Dichloroethene	12	<	NC	<	<	0	<	<	0	<	<	1 0 1
1,1-Dichloroethane	500	2400	131	440.00	<	NC	<	<	0	1.5	0.94	48
2-Butanone	<	<	0	<	<	0	<	<	0	<	<	0
Chloroform	<	<	0	280	<	NC I	<	<	0	1.7	1.0	48
1,1,1-Trichloroethane	250	300	18	<	<	0	0.76	0.67	13	5.9	3.4	53
Carbon Tetrachloride	40	<	NC	<	<	0	<	<	0	<	<	0
Benzene	180	200	10.5	221	<	NC NC	<	<	0	0.27	<	NC
1,2-Dichloroethane	<	<	0	<	<	0	<	<	0	<	<	0
Trichloroethene	270	270	0.00	15000	21000	33	<	<	0	0.28	<	NC
1,2-Dichloropropane	25	<	NC	<	<	0	<	<	0	<	<	0
trans-1,3-Dichloropropene	<	<	0	<	<	0	<	<	0	<	<	0
Toluene	95	91	5	11000	13000	17	2.4	0.71	110	3.6	0.80	130
cis-1,3-Dichloropropene	<	<	0	<	<	0	<	<	0	<	<	0
Tetrachloroethene	230	260	12	44000	80000	58	107	89	19	7.2	5.4	29
2-Hexanone	<	<	0	<	<	0	<	<	0	<	<	0
Chlorobenzene	11	<	NC	<	<	0	<	<	0	<	<	) 0
Ethyl Benzene	420	340	21	10000	15000	40	<	<	0	0.30	<	NC
m,p-Xylene	730	400	58	5700	8500	39	<	<	0	0.54	<	NC
o-Xylene	390	320	20	1400	2000	35	<	<	0	<	<	0
Styrene	13	<	NC	360	<	NC	<	<	0	<	<	0
cis-1,2-Dichloroethene	290	246	17	1900	1700	11.1	<	<	0	<	<	0

NC: Not calculated because one of the samples from the duplicate pair was nondetect while the compound was detected in the duplicate.

Table 1-4
Ground Water Equipment Blank Summary - Fall 1998
Himco Dump Superfund Site
Elkhart, Indiana

Sample location Sample number	WT115A rinsate blank MEBQJ1	WT119A rinsate blank MEBQJ5		
Date sampled Units	10/21/1998 µg/L	10/22/1998		
TOTAL METALS	Processor → Classer of PRIFE SPACETER SE-SERVED.	Lessing to the man the control of th		
Aluminum	26.0 U	26.0 U		
Antimony	42.2 U	45.4 J		
Arsenic	0.90 UJ	0.90 U		
Barium	1.9 U	1.9 U		
Beryllium	0.60 U	0.60 UJ		
Cadmium	4.6 U	4.6 U		
Calcium	68.4 J	69,3 J		
Chromium	7.0 U	7.0 U		
Cobalt	7.8 U	7.8 U		
Copper	4.1 U			
Iron	12.8 J 👉 📲 🐫	11.7 U		
Lead	0.50 U	0.50 U		
Magnesium	50.1 U	50.1 U		
Manganese	2.9 U	2.9 U		
Mercury	0.10 U	0.10 U		
Nickel	28.3 U	28.3 U		
Potassium	926 U	926 U		
Selenium	0.60 R	0.80 J		
Silver	5.3 U	5.3 U		
Sodium	81.6 U	274		
Thallium	0.40 U	0.40 U		
Vanadium	12.3 U	12.3 U		
Zinc	11.2 1	# 4 7 4 2 8 8 Ja		
Cyanide	12.0 J 🐴 😘 😘	2.0 UJ		
SEMIVOLATILE ORGANICS				
Sample number	ECMQ3	ECMR1		
bis(2-Ethylhexyl)phthalate	10 U	W. 341		

Shading indicates the constituent was detected.

No volatile compounds were detected.

No semive the compounds were detected with the exception of bis (2-ethylhexyl)phthalate.

Table 1-5
Summary of Soil Gas Sampling Ambient Air and Equipment Blank Results - Fall 1998
Himco Dump Superfund Site
Elkhart, Indiana

Sample Location Sample Description	Laboration of the state of the	TT-12 Equipment Blank	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	TT-27 Equipment Blank
Analyte	μ <b>g/m</b> <sup>3</sup>	μ <b>g/m</b> <sup>3</sup>	μ <b>g/m</b> <sup>3</sup>	μ <b>g/m</b> ³
Chloromethane	μ <b>g/m</b> ND	μ <b>g/m</b> ND	μ <b>g/m</b> ND	μ <b>g/III</b> 0.66
Vinyl Chloride	ND	1.6	ND	ND
1,1-Dichloroethene	ND	0.33	ND	ND
Carbon Disulfide	ND	2.6	0.42	1.6
Acetone	3.5	11	ND	ND
Methylene Chloride	1.3	ND	60	29
trans-1,2-Dichloroethene	ND	ND	0.40	ND
2-Butanone	ND	3.6	ND	ND
1,1,1-Trichloroethane	ND	4.3	ND	ND
Carbon Tetrachloride	0.41	ND	0.44	0.41
Benzene	2.3	2.2	2.9	2.7
Trichloroethene	ND	ND	ND	ND
Toluene	2.9	0.47	5.1	4.7
Tetrachloroethene	0.67	0.57	ND	0.66
Ethyl Benzene	0.81	ND	0.97	0.90
m,p-Xylene	1.6	ND	2.5	2.3
o-Xylene	0.45	ND	0.92	0.71
Styrene	1.2	ND	1.4	2.4
cis-1,2-Dichloroethene	ND	ND	0.30	ND

Table 1-6
Summary of Compounds Detected in Soll Gas Trip Blank Samples - Fall 1998
Himco Dump Superfund Site
Elkhart, Indiana

Sample Location	Trip Blank					
Sample Tube Numbers	7119A & B	7204A & B	7101A&B	7217A&B	7205A & B	7111A & B
・ 逆性:Compound 🦠 😁	* ing	falling in	· ng*	i∙ ng :::•	ng -	🧚 jing 🚉 🤻
Bromomethane	<10	<10	<17	<10	<17	<13
Carbon Disulfide	<5.0	<5.0	16	<5.0	11	7.3
Benzene	<5.0	<5.0	43	<5.0	<8.5	37
Toluene	<5.0	<5.0	<8.5	<5.0	<8.5	7.6
Tetrachloroethene	<5.0	<5.0	<8.5	<5.0	<8.5	22
Ethyl Benzene	<5.0	<5.0	<8.5	<5.0	<8.5	6.5
m,p-Xylene	<5.0	<5.0	<8.5	<5.0	<8.5	14

As Sample Location	Trip Blank				
Sample Tube Numbers	7705A & B	7712A & B	7715A&B	7113A & B	7904A & B
Compound	ng	ng	ng 🔩	ng	i ng 💨
Bromomethane	23	13	<10	<10	<10
Carbon Disulfide	<6.5	<5.0	<5.0	<5.0	<5.0
Benzene	46	<5.0	<5.0	<5.0	<5.0
Toluene	17	<5.0	<5.0	<5.0	<5.0
Tetrachloroethene	<6.5	<5.0	<5.0	<5.0	<5.0
Ethyl Benzene	<6.5	<5.0	<5.0	<5.0	<5.0
m,p-Xylene	16	<5.0	<5.0	<5.0	<5.0

# 1998 Soil, Ground Water, and Soil Gas Analytical Results Reports

# Regional Transmittal Form

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	11-23-98
SUBJECT:	
FROM:	Stephen L. Ostrodka, Chief (HSRL-5J) Superfund Technical Support Section
TO:	Data User: USACE
We have r	reviewed the data for the following case:
SITE NAME	: Himao Dunp (IN)
CASE NUMB	ER: 26593   SDG NUMBER: MEBOHO
	d Type of Samples: 8 (Water/Soil) Wilals
	mbers: MEBQH0-2 6-7 MEBQJ3-5
	ry: SVL Hrs. for Review: 8hrs.
	are our findings:
all da	ila are usable with the quality carriers
liscubid	in the attached warrative.
	L. FINKO ( WEEL-
	11-23 03

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

SDG Number: MEBQH0 Laboratory: SVL

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

3 low-level water and 5 low-level soil samples, numbered MEBQJ3-5, MEBQH0-2,6-7, the soil samples were collected on 10/21/98 and the water samples on 10/22/98. The lab received the soil samples on 10/22/98 and the water on 10/23/98 in good condition. All samples were analyzed for metals. All samples were analyzed using CLP SOW ILM04.0 analysis procedure.

Mercury analysis was performed using a Cold Vapor AA Technique. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectrometric procedure.

Reviewed By: T.Balikji-Shammo

SDG Number: MEBQH0 Laboratory: SVL

### HOLDING TIME:

HOLDING TIME CRITERIA

Inorganic

	Holdir	ng Time		рн			
	Primary	Expanded	Primary	Expanded			
·							
Metals	180	0	2.0	0.0			
Mercury	28	0	2.0	0.0			
Cyanide	14	0	12.0	0.0			

DC-280: The following inorganic soil samples were reviewed for holding time violations using criteria developed for water samples.

MEBQH0, MEBQH1, MEBQH2, MEBQH6, MEBQH7

### 2. CALIBRATIONS:

CALIBRATION CRITERIA

------

Inorganic

-----

Percent Recovery Limits

,

	Pri	mary	Expanded				
	Low	High	Low	High			
ICP	90.00	110.00	75.00	125.00			
Mercury	80.00	120.00	65.00	135.00			

No problems were found for this qualification.

Reviewed By: T.Balikji-Shammo

Date: <u>November 12, 1998</u>

SDG Number: MEBQH0 Laboratory: SVL

# BLANKS:

# LABORATORY BLANKS CRITERIA

DC-283: The following inorganic samples are associated with a blank analyte with negative concentration whose absolute value is greater than the instrument detection limit (IDL). The sample concentration is also greater than the IDL and less than five times the absolute value of the blank. Hits are flagged "J". Some non-detect reading are sufficiently high that the detection limit may be elevated. These non-detect are flagged "UJ".

Zinc MEBQJ3, MEBQJ4, MEBQJ5

Cyanide MEBQJ5

DC-284: Sample MEBQJ5 is a field blank. The following inorganic samples are associated with a calibration, preparation, or field blank concentration which is greater than the instrument detection limitary (IDL). The sample concentration is also greater than the IDL and less than five times the blank concentration.

Hits are qualified "J"; non-detects are acceptable.

Aluminum

MEBQJ3, MEBQJ4

Antimony

MEBQJ3, MEBQJ5, MEBQH1, MEBQH6

Beryllium

MEBQHO, MEBQH1, MEBQH2, MEBQH6

Calcium

MEBQJ5

Lead

MEBQJ3, MEBQJ4

Sodium

MEBQJ5

Reviewed By: T.Balikji-Shammo

SDG Number: MEBQH0 Laboratory: SVL



Cyanide

MEBQHO, MEBQH2, MEBQH6, MEBQJ3

DC-338: During review of the following inorganic samples, the reported IDL/default CRDL value was used for cyanide.

MEBQH0, MEBQH1, MEBQH2, MEBQH6, MEBQH7, MEBQJ3, MEBQJ4, MEBQJ5

# 4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

MATRIX S	SPIKE	CRIT	CERIA	1
				,
Inorgan	ic			
		<b></b> -		
Percent	Recov	ery	Limi	ts
pper			125	. 0
ower			75	. 0
Extreme	lower	c	30	. 0

DC-268: The following inorganic samples are associated with a matrix spike recovery which is low (30-74 %) indicating that sample results may be biased low.

Hits are qualified "J" and non-detects are qualified "UJ".

Antimony

MEBQH0, MEBQH1, MEBQH2, MEBQH6, MEBQH7

Arsenic

MEBQHO, MEBQH1, MEBQH2, MEBQH6, MEBQH7

Selenium

MEBQJ3, MEBQJ4, MEBQJ5

No problems were found for the lab control sample.



Reviewed By: T.Balikji-Shammo

Case Number: 26593 SDG Number: MEBQH0 Site Name: Himco Dump Laboratory: SVL



No problems were found for the lab control sample.

## 5. LABORATORY AND FIELD DUPLICATE

Samples MEBQJ3 and MEBQJ4 are field duplicates with good correlation.

### 5. ICP ANALYSIS

No problems were found for this qualification.

### 7. GFAA ANALYSIS

No problems were found for this qualification.

### 8. SAMPLE RESULTS

All data, except those qualified above, are acceptable.

Reviewed By: T.Balikji-Shammo

۲ 	ILE NAME: MEBQHO DATE:	11/00/98   IME: 13:01
Ç	RITERIA FILE: FGDR194	
-		DATA
1	Original	X  Qualified
	QUALIFI	CATIONS PERFORMED
X X X	Quantitation Limit Percent Moisture Holding Time Calibrations Matrix Spikes IPC Internal Standards SMC/Surrogates System Performance Sample Cleanup	X CRDL Standards X ICS X LCS X Duplicates X Furnace AA QC X ICP Serial Dilutions X Sample Results Verificatio X Laboratory Blanks Field QC
	PRI	NT NON-DETECTS
x	Yes	No
	PRINT I	REJECTED RESULTS
1	Yes	No

# CADRE Data Qualifier Sheet

<u>Oualifiers</u>	Data Oualifier Definitions
ΰ	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The anlayte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The data are unusable. (The compound may or may not be present)

Analytical Results (Qualified Data) Page \_1 of \_2\_

SDG: MEBQH0 Himco Dump

SVL

Case #: 26593

Site:

Lab. : Reviewer:

Tate:

T.Balikji~Shammo November 12, 1998

Sample Number: Sampling Location: Matrix: Units: Date Sampled: % Solids: Dilution Factor:	MEBQJ3 WT119A Water ug/L 10/22/98 0.0	3	MEBQJ4 WT119A Water ug/L 10/22/9 0.0	8	MEBQJ5 WT119A Water ug/L 10/22/98 0.0 1.0					
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aluminum Antimony	_258_ _43.2_	 _J		_J _U	_26.0_ 45.4_	_U				
Arsenic	_5.8_		5.3		_0.90_	_0_			<del></del>	
Barium			76.0		1.9_					
Beryllium	_0.60_	UJ	0.60	ບັນ	0.60_					i
Cadmium	_4.6_		4.6		_4.6_	U				i
Calcium	_143000		_14200		_69.3_	_J				i
Chromium	_ _7.8_		_ _7.0_	ַ	_7.0_					
Cobalt	_7.8_	_U_	_7.8_	_ប	_7.8_					
Copper	_5.4_		_4.9_		_4.1_	_u				
Iron	_1690_		_1690_		_11.7_	_U		<del></del>		
Lead	_3.4_	_J	_2.4_	_J	_0.50_	_U				
Magnesium	_44800_		_44500		_50.1_	_ប			<del></del>	\
Manganese	_279_		_278_		_2.9_					
Mercury	_0.10_	U	_0.10_	_u	_0.10_	_u				
Nickel	_28.3_	_U	_28.3_	_ʊ	_28.3_	_u				!
Potassium	_11500_	_ <sup>J</sup>	_11200	_J	_926_	U				
Selenium	_6.0_	_J	_6.0_	_ <sup>J</sup>	_0.60_	_J				
Silver	_5.3_	_U	_5.3_	U	_5.3_	_n			<del></del>	
Sodium	_69100_		_68200		_274_	_J				!
Thallium	_0.40_		_0.40_	_u	_0.40_	_ <u>u</u>				
Vanadium	_12.3_	_ñ	_12.3_	_ <u>_</u>	_12.3_	_a				
Zinc	_4.9_	_J	_4.9_	_ <sup>J</sup>	_8.8_	_J				
Cyanide	_12.0_	_J	_15.2_	<del></del>	_2.0_	_UJ_	<del></del>			



Analytical Results (Qualified Data Page \_2\_ of \_2\_

Case #: 26593

SDG: MEBQH0 Himco Dump

Site:

Lab. :

SVL

Reviewer: Date:

T.Balikji-Shammo November 12, 1998

Sample Number: Sampling Location: Matrix: Units: Date Sampled: % Solids: Dilution Factor:	MEBQH0 SB11-0. Soil mg/kg 10/21/9 94.5		MEBQH1 SB11-2 Soil mg/kg 10/21/9 96.0 1.0	8	MEBQH2 SB11-6 Soil mg/kg 10/21/9 95.6 1.0	8	MEBQH6 SB07-0. Soil mg/kg 10/21/9 95.2 1.0		MEBQH7 SB07-2 Soil mg/kg 10/21/9 97.2	8
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aluminum	_4740_	<del></del>	_3360_		_4270_		_3100			
Antimony	_8.9_	UJ	_9.2_	J	_8.8_	_ບປ_	_13.1_	_J	_8.7_	
Arsenic	12.5	_J	4.7	_J	2.8	_J	2.3	_J	_0.70_	
Barium	_102_		57.0		_55.8_		_13.0_		_7.8_	
Beryllium	_0.50_	_J_	_0.20_	J	_0.20_	J	0.20	J	0.10	UJ
Cadmium	_1.1_		_1.0_	ับ	_1.0_		1.0		_0.90_	
Calcium	_21900_		_26400		_7620_		1320		_2140_	
Chromium	_12.6_		_9.2_		_17.2_		_6.0_		_5.1_	
Cobalt	_3.2_		_3.4_		_6.8_		_4.0_		_1.9_	
Copper	_149_		_46.1_		_45.9_		_7.4_		_6.4_	
Iron	_11100_		_8820_		21200		_5240_		_4390_	
Lead	_160_	_J	_92.9_	_J	_186_	_J	_5.2_			
Magnesium	_5950_		11400		_2580_		1140		1160	
Manganese	_492_		_278_		_398_		_133_		_44.7_	
Mercury	_0.20_		_0.20_		_0.20_		0.05		_0.05	_U_
Nickel	_12.0_		_5.9_	ับ	_10.0_		_6.0_		_5.8_	
Potassium	_462_		_287_		_377_ <sup>-</sup> ·		_234_		226	
Selenium	_0.10_	_ບJ_	_0.10_	_ບປ_	0.10	UJ	0.10	UJ	_0.10_	
Silver	_1.1_		_1.1_		_1.1_		_1.1_		_1.1_	u
Sodium	_127_		_54.7_		_49.1		41.6		_16.8_	
Thallium	_0.10_		_0.08	U	0.08	_ʊ_	_0.10_	J	_0.08_	
Vanadium	_11.3_		_8.9_				_8.1_		_4.7_	
Zinc	_294_		136		109		20.2		40.0	<del></del>
Cyanide	_0.40_	_J	_0.10_	UJ	_0.30_	_J_	_0.20_	_J_	_0.10_	
										. ——

# DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature utinized in this document, the following code letters and associated definitions are provide:

- U Indicates the material was analyzed, but was not detected above the level of the associated value.

  The associated value is either the sample quantitation limit or the sample detection limit.
- J Indicates the associated value is an estimated quantity.
- R Indicates the data are unusable. (Note: The analyte may or may not be present.)
- UI Indicates the material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
- E Indicates the reported value is estimated because of the presence of interferences. An explanatory note shall be included under Comments on the Cover Page (if the problem applies to all samples) or on the specific FORM I-IN (if it is an isolated problem).
- M Indicates duplicate injection precision is not met.
- N Indictaes the spike sample recovery is not within control limits.
- S Indicates the reported value was determined by the Method of Standard Addition (MSA).
- W Indicates the post-digestion spike for furnace AA analysis is out of control limits (85%-115%), while sample absorbance is less than 50% of the spike absorbance.
- + Indicates the correlation coefficient for the MSA is less than 0.995.
- Indicates the duplicate analysis is not within control limits.

Note: Entering "S", "W" or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

ESAT-5-087.1

CASE \ SASE \ SA

FORM !		FORM 1	FORM 1	FORM 3	FORM 3	FORM )	FORM 4	FORMS	FORM 6	FORM 1	FORM 7	FORM 9	FORM 9	FORM 6	FORM I	rain	FELD	F EELD	7021.0		
ELELODYT	BOLD TD-0X	ENTITIAL CALIB	CONTI N CALIB	CALIB BLANK	PREP WATER BLANK	PERP BOIL BLANK	X21 6-11	SPIKE SA	BOIL. DUP BYD	LCU AQ	LCs Jog.	BERIAL DELUTION AQUEOUS	SERIAL DELUTION SOIL	AQ DUF APD	AQ SPIES	BLANK	DUP RIB	BLANK	ETD FUP	GFAA BUP	CFAA ANAL SPEEK
ALUMPUM		<u> </u>		54.3								15.3									
ANTIMONT												407.		200.0							
ALIENC									57.5~												
BARTUM																					
BERTLLIUM				0.8					]												
CADMIUM																					
CALCTUM				40.621					61.6												
сявомим												100.0		200.0-							
CORALT				8.8																	
COPPER												100.0									
TRON				27.957													}				
LEAD				0.9										13.9-							
MAGREERIAM				59.5					45.7/												
MANGANESE												,						·			
MERCURY																		·			
MICEEL									200.0												
POTABBIUM																					
BELENTIM							·	37.0				27.0									
SOLVER .																					
MUTODA				110.206					73.51												
THALLIUM						-			200.0												
TDV																					
VANADRM																					
zovc				-3.6								00.0		26.51							
CTANDE	1	1		1	-2.267	}	}	-	200.0	}	-1	1	l	12.90	- {						



### QC EXCEPTION SUMMARY REPORT

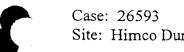
	~		
CASE\SAS/: 26593	BITE: AimCO OumpIN	MATRIX: SOIL	WATER SAMPLE BPK:
DATA SET:	LAB: SYL	CONC:	WATER SAMPLE DUP:
LAB QC # 11_9_98	REVIEWED BY: Tania Balik, i-	shamm o	SOIL SAMPLE SPK:
DATE:		· ·	SOIL SAMPLE DUP:

FORM #	J	FORM 3	FORM 3	FORM S	FORM 3	FORM )	FORM 4	FORMS	FORM 6	FORM 7	FORM T	FORM 9	FORM 1	FORM 6	PORM I	FOLLD	PELD	FIELD	7021.0		
ELEMENT	HOLD	BYTTUL. CALIB	CONTI N CALIB	CALIB BLANK	PREP WATER BLANK	PRRP BOIL BLANK	)(3 %),	SOIL SPIKE THE	BOIL DUP BPD	LC# AQ	LCS SOIL	PERIOR PERIOR	SERIAL DELUTION SOE,	AQ DUP RPD	AQ BPIKE .	BLANK	DUP 1170	BLANK	יוטפ פינג	CFAA DUF	GFAA AVALYT SMEE
ALUMINUM				52.2																	
ANTBACKT				59.3				72.5	57.5/				100.0								
ABJENIC								50.0													
BARIUM				6-9643									13.5								
BERTLERM				0.90									100.0								
CADMIUM																					
CALCIUM				47.8					61.6												
СИКОМИМ													100.0								
CORALT								·					100.0								
COPPER																					
TRON				23.4																	· 
LEAD				-0.6																	
MATRESTAM				57.2					45.7												
MANGANERE																					
MERCURY								7													
MICIOEL.									200.9				100.0								
POTABBIUM						٠,							100.0								
BELENTUM																					
BOLVER .																					
MAT DOM									73.5				100.0								
THALLIUM							· .		200.0												
TON																					
MUTGANAV													100:0				]		]		
I D+C				-3.6																	
CTANTOE				9.3			7		200.0				1	}	1	1	I		1	1	

# Regional Transmittal Form

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE: 02-04-99
SUBJECT: Review of Data Received for Review on Jan 28 1999
FROM: Stephen L. Ostrodka, Chief (HSRL-5J) / LF. Superfund Technical Support Section / LF.
TO: Data User: US Army Corp. of Eng.
We have reviewed the data for the following case:
SITE NAME: Himco Dump (IN)
CASE NUMBER: 26593 SDG NUMBER: MEBQF5
Number and Type of Samples: 20 water and soil samples
Sample Numbers: MEBQF1-3 5-9, MEBQG0-3 7-9, MEBQH3-5, MEBQ
Laboratory: SVL Hrs. for Review: 16
Following are our findings:
all warer de data are unusable because de spike
recovery was extremely low (<30%).
recovery was extremely low (<30%). All other data are usable with the qualifications
discribed in the attached varrative.
L. FINKE BERG
CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J



Case: 26593 SDG: MEBQF5
Site: Himco Dump Laboratory: SVL

The laboratory's portion of this case contains 5 low-level water samples and 15 low-level soil samples analyzed for total metals and total cyanide. The following narrative lists the out-of-control audits and their possible effect on the sample results.

Evidential Audit: All forms and most of the raw data documents are originals. One of the chain-of-custody sheets is a copy; the original may be found with SDG MEBQH0. The custody seals and one of the airbills are copies; the original documents may be found with SDG MEBHQ0. GFAA, Hg, and CN real-time raw data was not submitted for review with this case; instead, run summary reports were included for these parameters. The original DC-1 form, sample tags, airbill, and chain-of-custody documents are present in the case. All documents are in the order as specified on the inventory sheet (form DC-2).

# Waters (MEBQF1-3, MEBQJ1, MEBQJ2)

ICP analyses: The calibration blank contained Ca (28.9 ug/l), and Ca on MEBQJ1 is estimated (J) due to contamination.

The spike recovery for Fe (165.5%) is greater than the 125% upper limit; however, the sample concentration was greater than 4 times the spike, thus invalidating the spike as a QC audit. The calibration blank contained Fe (24.3 ug/l), and Fe on MEBQJ1 is estimated (J) due to contamination.

The calibration blank also contained Zn (4.8 ug/l). Zn on MEBQF3 and MEBQJ1 are estimated (J) due to contamination.

GFAA Analyses: The 60.3% As spike recovery indicates a low bias, and As on MEBQF1, MEBQF2, and MEBQJ2 are estimated (J). These three As results were flagged "W" and are also affected by interference. As on MEBQF3 and MEBQJ1 are estimated (UJ) due to a possible elevated detection limit.

The 26.0% Se spike recovery indicates a low bias, and all Se data are unusable (R). Se on MEBQF1-3 and MEBQJ2 were flagged "W" and are also affected by interference.

Other Qualifiers: A negative concentration reading was obtained for the CN calibration blank (-5.965 ug/l). CN on MEBQF1-3 and MEBQJ1 are estimated (J) due to a low bias.

Reviewed by	J. Ganz	Date: February 3, 1998
rectioned by	7. Own.	Dute. Tollowy 5. 1770

Case: 26593

Site: Himco Dump

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SDG: MEBQF5

Laboratory: SVL

Samples MEBQF1 and MEBQF2 are field duplicates and show good correlation. Samples MEBQF3 and MEBQF1 are field duplicates, and the duplicate differences were greater than the CRDLs for Ca, Fe, Mg, Mn, and Na. This indicates poor precision, and all Mg, Mn, and Na data are estimated (J). Ca and Fe on MEBQJ1 are also affected but are qualified above. All other Ca and Fe data are estimated (J) due to poor precision.

Sample MEBQJ2 was not sufficiently preserved for metals, indicating a low bias. The Al, Ba, and K results for this sample are estimated (J). The Sb, Be, Cd, Cr, Co, Cu, Pb, Hg, Ni, Ag, Tl, V, and Zn results are estimated (UJ) due to possibly elevated detection limits. The As, Ca, Fe, Mg, Mn, Se, and Na results are also affected but are qualified above.

# **Soils (MEBQF5-9; MEBQG0-3, 7-9; MEBQH3-5)**

ICP Analyses: The duplicate RPDs for Be (61.8%), Ca (42.3%), and Mg (36.7%) are greater than the 35% control limit; however, the duplicate differences are less than 2 times the CRDLs, and all Be, Ca, and Mg data are acceptable.

The calibration blank contained Co (8.6 ug/l) and Na (98.2 ug/l) indicating contamination, and the following results are estimated (J): all Na data and all Co results except for that on MEBQG0.

GFAA Analyses: The 62.1% As spike recovery indicates a low bias, and all As data are estimated (J). All As results except that on MEBQH4 were flagged "W" and are also affected by interference.

The calibration blank contained Pb (4.0 ug/l) indicating contamination. Pb on MEBQF6-9, MEBQG1-3, MEBQG7, and MEBQG9 are estimated (J).

Se on MEBQG1, MEBQH4, and MEBQH5 were flagged "W" and are estimated (UJ) due to interference.

Other Qualifiers: The calibration blank contained Hg (0.1 ug/l), and the following Hg results are estimated (J) due to contamination: MEBQF5, MEBQF8, MEBQG1-3, and MEBQH4.

The duplicate RPD for CN (200%) is greater than the 35% control limit; however, the duplicate difference is less than 2 times the CRDLs, and CN data are not qualified on this basis. The

Reviewed by	J. Ganz	Date:	February 3, 1998	
TYC ATC MCG DA	J. Galiz	Date	1 COLUMN 7 7 1770	

Case: 26593 SDG: MEBQF5
Site: Himco Dump Laboratory: SVL

preparation blank contained CN (0.322 mg/kg) indicating contamination, and a negative concentration value (-5.965 ug/l) was obtained for the calibration blank indicating a low bias. The following CN results are estimated (J): MEBQF5, MEBQF6, MEBQF8, MEBQG0-2, MEBQG7-9, and MEBQH3-5.

Reviewed by J. Ganz Date: February 3, 1998

)C	EXCEPTION	MARY	REPORT

K I	REPORT	. /
		1)/
	MATRIX:	$\omega_{l}$

CONC:

WATER SAMPLE SPK:

CASE\SAS#:	26593	
DATA SET:	MEBQF5	

10W WATER SAMPLE DUP:

REVIEWED BY: J. Ganz

SOIL SAMPLE SPK:

ATE:		28-9	19		•											~	017 C	WDT **	DIID :		
PATE!		2 0						<b>,</b>								8	OIL SI	AMPLE	DOPI		
FORM /		PORM 2	PORM 3	POWA	FORM 3	FORM 3	PORM 4	FORM 5	FORM 6	FORM 7	FORM 7	FORM 9	FORM 9	PORM 6	PORM 3	7121.0	FIELD	PELD	FIELD		
#1.80x60x17	HOLD	EALIN	CONTI N CALIB	CALIB BLANK	PREP WATER BLANK	PREP BOIL BLANK	ICI SR	SOU, SPIKE SR	BOIL, DUP RPD	LCB AQ	LCB BOIL	SERIAL PELUTION AQUEOUS	BERIAL DILUTION SOIL	AQ DUP RPD	AQ SPIEE WR	BLANE	QFI/2 DUF RPD	BLANK	AF3	CFAA DUP	CFAA ANALTT BPIEE
ALUMBRUM	PH=4	NA																			
ANTIMONY	MEBRIZ	E3 E9	ED				<u> </u>								<u> </u>	<u>                                     </u>					
ARSENIC		(ग) (त)	5)					62.1							60.3						i
BARIUM		111		<u> </u>			ļ														
BERTLLRIM					-, 625			OK	61.8												
CADMRIM																					
CALCIUM				28.9				oK-	42.3			·							199.9		
Стромил																					
COSALT				8.6																	
COPPER																					
IRON .				24.3											165.5	oK			198.9		
LEAD				4,0		0.87															
MAGPEREN								14	3627										200		
MANGANESE																			200		
MERCURY				0.1																	
MICKIEL.																					
POTABERIM																					
SELENTUM															26.0		[				
BEVER			1																		
MUTGOR				98.2															200		
TRALLRIM																					
194	$\bot$																				
VANADIUM		ليليل																			
EDIC,	V	VV	Ψ	4.8																	
CYANDE		' 1		-5,965		0.322		OK	200									ľ			

# DATA QUALIFIER DEFINITIONS

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- U Indicates the material was analyzed, but was not detected above the level of the associated value.

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- R Indicates the data are unusable. (Note: The analyte may or may not be present.)
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- E Indicates the reported value is estimated because of the presence of interferences. An explanatory note shall be included under Comments on the Cover Page (if the problem applies to all samples) or on the specific FORM I-IN (if it is an isolated problem).
- M Indicates duplicate injection precision is not met.
- N Indictaes the spike sample recovery is not within control limits.
- S Indicates the reported value was determined by the Method of Standard Addition (MSA).
- W Indicates the post-digestion spike for furnace AA analysis is out of control limits (85%-115%), while sample absorbance is less than 50% of the spike absorbance.
- + Indicates the correlation coefficient for the MSA is less than 0.995.
- Indicates the duplicate analysis is not within control limits.

Note: Entering "S", "W" or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

ESAT-5-087.1

SILVER

\*\*\*\*\*CASE NARRATIVE

CASE: 26593 SDG: MEBQF5

SILVER RECEIVED SOIL AND WATER SAMPLES FOR METALS AND CYANIDE.

**COOLER TEMPERATURES:** 

AIRBILL NUMBER: 1172422112 4°
AIRBILL NUMBER: 1172422101 3°
AIRBILL NUMBER: 809200471671 4°
AIRBILL NUMBER: 809200471660 5°

PH ON HNO3 PRESERVED BOTTLE FOR SAMPLE MEBQJ2 WAS 4. PER CHARLES HUTCHINSON, SILVER PROCEEDED WITH ANALYSIS (REFERENCE TELEPHONE LOG).

SILVER REDIGESTED THE SOIL SAMPLES FOR ICP AS THE QC CRITERION FAILED.

DISK TO DYNCORP AND REGION 5.

MELBA BENCICH

DOCUMENT CONTROL OFFICER

#### U.S. EPA - CLP COVER PAGE - INORGANIC ANALYSES DATA PACKAGE Name: SVL ANALYTICAL INC. Contract: 68-D5-0138 Lab Code: SILVER Case No.: 26593 SAS No.: SDG No.:MEBQF5 SOW No.: ILM04.0 EPA Sample No. Lab Sample ID MEBOF1 MEBQF1 MEBQF1D MEBOF1D MEBOF1S MEBQF1S MEBQF2 MEBQF2 MEBQF3\_\_ MEBQF3 MEBQF5 MEBQF5 MEBOF6 MEBQF6 MEBQF7 MEBQF7 MEBQF8 MEBQF8 MEBOF9 MEBQF9 MEBOG0 MEBQG0 MEBQG1 MEBQG1 MEBQG2 MEBQG2 MEBQG3 MEBQG3 MEBQG7 MEBQG7 MEBQG7D MEBQG7D MEBQG7S MEBQG7S MEBQG8 MEBOG8 MEBOG9 MEBQG9 MEBQH3 MEBQH3 Were ICP interelement corrections applied ? Yes/No YES Were ICP background corrections applied ? Yes/No YES If yes - were raw data generated before application of background corrections ? Yes/No NO C ments: I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted

on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature:	run onc	Name:	METRA BENCICH
Date:	NOVEMBER 4, 1998	Title:	DOCUMENT CONTROL OFFICER

# U.S. EPA - CLP

	COVER PAGE - INORGA	ANIC ANALYSES DATA F	PACKAGE
ab Name: SV	L_ANALYTICAL_INC	Contract: 68-D5-0	0138
Lab Code: SI	LVER Case No.: 26593	SAS No.:	SDG No.:MEBQF5
SOW No.: ILM	04.0		
	EPA Sample No.  MEBQH4  MEBQH5  MEBQJ1  MEBQJ2	Lab Sample ID  MEBQH4  MEBQH5  MEBQJ1  MEBQJ2	- - - -
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Were ICP int	erelement corrections app	plied ?	Yes/No YES
	kground corrections appli		Yes/No YES
	<ul> <li>were raw data generated tion of background correct</li> </ul>		Yes/No NO_
Comments:			,
conditions of other than to in this hard on floppy di	nat this data package is of the contract, both technical conditions detailed a decopy data package and in iskette has been authorizesignee, as verified by the conditions of t	hnically and for conbove. Release of the the computer-readaled by the Laborator he following signate.  Name: METRA	mpleteness, for he data contained ble data submitted y Manager or the ure.
Date:	NÓVEMBER 4, 1998	Title: DOCUMENT	CONTROL OFFICER
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Lab Name: SVL\_ANALYTICAL\_INC.\_\_\_\_ Contract: 68-D5-0138 \_\_\_\_\_

Lab Code: SILVER Case No.: 26593 SAS No.: SDG No.: MEBQF5

Matrix (soil/water): WATER

Lab Sample ID: MEBQF1

Level (low/med): LOW\_\_

Date Received: 10/22/98

% Solids:

\_\_0.0

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	26.0	บิ		P
7440-36-0	Antimony_	42.2	U		P
7440-38-2	Arsenic	3.3	В	WN	F
7440-39-3	Barium	85.5	В		P_
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	4.6	ָּט		P
7440-70-2	Calcium	361000			P
7440-47-3	Chromium	11.3	-		P
7440-48-4	Cobalt	7.8	ָ <del>บ</del>		P
7440-50-8	Copper	4.1	ָּט		P
7439-89-6	Iron	26900	į		$P^-$
7439-92-1	Lead	0.50	บิ		$ \mathbf{F}^- $
7439-95-4	Magnesium	13900	i i		P
7439-96-5	Manganese	2940	-		P
7439-97-6	Mercury	0.10	Ū		CV
7440-02-0	Nickel	28.3	U		P
7440-09-7	Potassium	3630	В	i ————	P
7782-49-2	Selenium	3.0	U	WN	F
7440-22-4	Silver	5.3	ָּט	i — —	P_
7440-23-5	Sodium	33100	<u> </u>		P_
7440-28-0	Thallium	0.40	Ū	1	F_
7440-62-2	Vanadium_	12.3	U	!	P_
7440-66-6	Zinc	3.2	U	1	P
<u> </u>	Cyanide	14.4	1_		CA
1	1	1	1	l	1

Commer	nts:						
Color	After:	COLORLESS	Clarity	After:	CLEAR_	Artifacts:	
Color	Before:	COLORLESS	Clarity	Before:	CLEAR_	Texture:	

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INORGANIC	ANALYSES	DATA	SHEET

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Lab Code: SILVER Case No.: 26593 SAS No.: \_\_\_\_ SDG No.: MEBQF5\_

Matrix (soil/water): WATER Lab Sample ID: MEBQF2

Level (low/med): LOW\_\_ Date Received: 10/22/98

% Solids: \_\_0.0

CAS No.	Analyte	Concentration	С	Q	M
7429-90-5	Aluminum	26.0	<del>บ</del>		<del>-</del>
7440-36-0	Antimony	42.2			$P^{-}$
7440-38-2	Arsenic	3.6	В	WN	F
7440-39-3	Barium	91.2			$P^{-}$
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	4.6	U		P
7440-70-2	Calcium	377000			P
7440-47-3	Chromium	13.1	<b>-</b>		P
7440-48-4	Cobalt	7.8	ប៊		P
7440-50-8	Copper	4.1	U		$P^{-}$
7439-89-6	Iron	28100			P
7439-92-1	Lead	0.50			$\mathbf{F}^{-}$
7439-95-4	Magnesium	14700			P
7439-96-5	Manganese	3080	_		P_
7439-97-6	Mercury	0.10	ับ		CV
7440-02-0	Nickel	28.3	ับ		P
7440-09-7	Potassium	3630	В		$P^-$
7782-49-2	Selenium	3.0	ับ	WN	F
7440-22-4	Silver	5.3	U		P
7440-23-5	Sodium	35800	į	i ———	P
7440-28-0	Thallium	0.40	Ū	i	F
7440-62-2	Vanadium		U	i ———	P
7440-66-6	Zinc	3.2	U	į ———	$\mathbf{P}^{-}$
i r	Cyanide	17.9		i	CĀ

Color	Before:	COLORLESS	Clarity	Before:	CLEAR_	Texture:	<del></del>
Color	After:	COLORLESS	Clarity	After:	CLEAR_	Artifacts:	
Comme	nts:						
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INORGANIC	ANALYSES	DATA	SHEET

EPA	SAMPLE	NO
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Lab Name: SVL\_ANALYTICAL\_INC.\_\_\_\_ Contract: 68-D5-0138

Lab Code: SILVER Case No.: 26593 SAS No.: \_\_\_\_ SDG No.: MEBQF5\_\_

Matrix (soil/water): WATER

Lab Sample ID: MEBQF3

Level (low/med):

Date Received: 10/22/98

% Solids:

\_\_0.0

CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	94.1	$\overline{\mathtt{B}}$		P
7440-36-0	Antimony	42.2	•		P
7440-38-2	Arsenic	0.90	บ	N	F
7440-39-3	Barium	33.5	В		$\mathbf{P}^{-}$
7440-41-7	Beryllium	0.60	บ		P
7440-43-9	Cadmium	4.6	U		P
7440-70-2	Calcium	293000			P_
7440-47-3	Chromium	10.4	-		P_
7440-48-4	Cobalt	7.8	ָ <del>ប</del>		P_
7440-50-8	Copper	4.1	¦ U ¦		$ P^- $
7439-89-6	Iron	4590	_		P_
7 <b>4</b> 39-92-1	Lead	0.50	U		F_
7439-95-4	Magnesium	20300	_		P_
7439-96-5	Manganese	513			P_
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	28.3	U		P_
7440-09-7	Potassium	3580	B		P_
7782-49-2	Selenium_	3.0	U	WN	F_
7440-22-4	Silver	5.3	ט		P_
7440-23-5	Sodium	12100	-		P_
7440-28-0	Thallium_	0.40	U	! !	F_
7 <b>44</b> 0-62-2	Vanadium_	12.3	U	! !	P_
7440-66-6	Zinc	3.7	•	!	P_
	Cyanide	12.4	1_	!	CA
1	İ	1	1_	l	.

Comme	nts:					
Color	After:	COLORLESS	Clarity	After:	CLEAR_	Artifacts:
Color	Before:	COLORLESS	Clarity	Before:	CLEAR_	Texture:

# INORGANIC ANALYSES DATA SHEET

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Lab Name: SVL ANALYTICAL INC. \_\_\_\_ Contract: 68-D5-0138 \_\_\_\_\_

Case No.: 26593 SAS No.: \_\_\_\_\_ SDG No.: MEBQF5\_\_\_

Lab Sample ID: MEBQF5 Matrix (soil/water): SOIL\_

Date Received: 10/21/98 LOW\_\_\_ Level (low/med):

\_96.7 % Solids:

Lab Code: SILVER

	1	!	1 1		į.
CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	3150	-		P
7440-36-0	Antimony	8.7	ָּיָ <del>ט</del>		P
7440-38-2	Arsenic	1.1	В	WN	F
7440-39-3	Barium	14.8	В		P
7440-41-7	Beryllium	0.12			P
7440-43-9	Cadmium	0.95	U		P
7440-70-2	Calcium	953	В		P
7440-47-3	Chromium	5.3	j j		P
7440-48-4	Cobalt	3.3	B		P
7440-50-8	Copper	5.3	i i		P
7439-89-6	Iron	4680	<u> </u>		P
7439-92-1	Lead	5.4	i — i		F
7439-95-4	Magnesium	919	B		P
7439-96-5	Manganese	105			P
7439-97-6	Mercury	0.05	B		CV
7440-02-0	Nickel	5.9	ָּ <mark>ָ</mark> ָּט		P
7440-09-7	Potassium	192	ับ		P
7782-49-2	Selenium	0.12	ָ ט		F
7440-22-4	Silver	1.1	ָ ט		P
7440-23-5	Sodium	29.9	B		P
7440-28-0	Thallium	0.08	U	i	F
7440-62-2	Vanadium	10.0	•	i	P
7440-66-6	Zinc	15.5	•	i	P
<u> </u>	Cyanide	0.92	<u>i</u> –	i	CĀ

Color Before:	BROWN	Clarity	Before:	Texture:	MEDIUM
Color After:	YELLOW	Clarity	After:	 Artifacts:	
Comments:					
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# INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	NO.
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							MEBQF6
Lab	Name:	SVL	_ANALYTICAL_	_INC	Contract:	68-D5-0138	l

Lab Code: SILVER Case No.: 26593 SAS No.: \_\_\_\_ SDG No.: MEBQF5\_

Matrix (soil/water): SOIL\_ Lab Sample ID: MEBQF6

Level (low/med): LOW\_\_\_ Date Received: 10/21/98

% Solids: \_\_97.6

	1	1	1 1		1 1
CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	1900	-		<del>-</del>
7440-36-0	Antimony -	8.6	บิ		$P^{-}$
7440-38-2	Arsenic	0.55	В	WN	F
7440-39-3	Barium	126			P_
7440-41-7	Beryllium	0.12	ָ <u>.</u>		P
7440-43-9	Cadmium	0.94	ָ ט		$P^{-}$
7440-70-2	Calcium	6060	i i		P
7440-47-3	Chromium	5.3	i – i		P
7440-48-4	Cobalt	1.9	B		P
7440-50-8	Copper	5.1	В		P
7439-89-6	Iron	2590			P
7439-92-1	Lead	6.9	-		F
7439-95-4	Magnesium	1040	<u> </u>		$P^{-}$
7439-96-5	Manganese	35.8	i —		P
7439-97-6	Mercury	0.05	Ū	<del></del>	cv
7440-02-0	Nickel	6.7	•	i <del></del>	P
7440-09-7	Potassium	190	•		· P
7782-49-2	Selenium	0.12	•		F
7440-22-4	Silver	1.1	•		`  <sub>P</sub> _
7440-23-5	Sodium	32.7		i	ip-
7440-28-0	Thallium	0.08			F
7440-62-2	Vanadium_	5.7	•	; <del></del>	P
7440-66-6	Zinc	14.9		İ	$P^-$
i	Cyanide	0.40	iĦ	i	CA

Comments:			·
Color After:	YELLOW	Clarity After:	Artifacts:
Color Before:	BROWN	Clarity Before:	Texture: MEDIUM

Date: January 2002

Several water volatile trip blanks were analyzed outside holding times as indicated in the trip blank discussion.

## 3 Laboratory Control

### 3.1 Method Control

### 3.1.1 Soil and Ground Water

This section presents an overview of the data validation performed by US EPA-Region 5 contractors using the National Functional Guidelines for Inorganic and Organic Data Review. The data is generally usable except as noted here. Complete details can be found in the validation narratives provided in this appendix.

### 3.1.1.1 Instrument Calibration

**Volatiles -** Numerous instances of continuing calibration whose corresponding initial calibration has percent relative standard deviations outside primary criteria and continuing calibration with percent difference outside criteria are noted. The detections have been qualified "J" and the nondetections qualified as "UJ".

**Semivolatiles** - Numerous instances of continuing calibration whose corresponding initial calibration has percent relative standard deviations outside primary criteria and continuing calibration with percent difference outside criteria are noted. The detections have been qualified "J" and the nondetections qualified as "UJ".

**Metals** - No problems are noted.

# 3.1.1.2 Laboratory Control Samples

No problems are noted.

### 3.1.1.3 Method Blanks

Volatiles - Where methylene chloride, acetone and 2-butanone are detected in the method blank, the accompanying samples are qualified "U" if the sample result is less than ten times the blank concentration.

**Semivolatiles** - Where pyrene is detected in the method blank the accompanying sample is qualified "U" if the sample result is less than five times the blank concentration.

of fifty percent (aluminum at 59%, barium at 55%, calcium at 70%, manganese at 88%, sodium at 53% and cyanide at 66%), none are significant enough to impact data usability.

Date: January 2002

**Ground Water -** The ground water field duplicates demonstrate excellent precision. The relative percent difference between pairs is predominantly in the range of ten to twenty percent. The greatest difference calculated is the lead result for one pair at 34 percent. See Table 1-2 for all ground water duplicate sample RPDs.

**Soil Vapor** - The duplicate pairs show excellent precision with the following exceptions. See Table 1-3 for all soil vapor duplicate sample RPDs.

-Location TT-14: The 1,1 dichloroethane RPD is greater than 100% and m, p-xylene RPD is

greater than 59%. Although these compounds have been correctly identified the concentration present must be considered estimated due to the variance

between samples.

-Location TT-26: Carbon disulfide RPD is 69% and the tetrachloroethene RPD is 59%.

-Location TT-39: Toluene has an RPD of 107% and the carbon disulfide RPD is 53%. The

concentrations of both compounds are near the reporting limits which may

explain the variability.

-Location TT-46: Carbon disulfide has an RPD of 71% and the toluene RPD is 128%. These

concentrations are also near their respective reporting limits which may

explain the variability.

# 2.2 Equipment Blanks

Equipment blank samples were collected by pouring purchased deionized water over the decontaminated equipment and capturing the run-off. These blank samples were always collected just prior to using the equipment at the referenced location.

Soil - Equipment blanks were not collected in support of soil sampling.

**Ground Water** - During the three day ground water sample collection activities two equipment rinse blanks were collected on separate days. See Table 1-4 for a summary of compounds detected. No volatile or semivolatile organic compounds were detected in either blank with the exception of bis (2-ethylhexyl)phthalate (BEHP) in one sample. BEHP was not detected in the accompanying field sample. Both of the blanks also contained inorganic analytes at low concentrations as described below.

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# INORGANIC ANALYSES DATA SHEET

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Lab Name: SVL\_ANALYTICAL\_INC.\_\_\_\_ Contract: 68-D5-0138 |\_\_\_\_\_

Lab Code: SILVER Case No.: 26593\_ SAS No.: \_\_\_\_\_ SDG No.: MEBQF5\_\_

Matrix (soil/water): SOIL

Lab Sample ID: MEBQF7

Level (low/med): LOW\_\_\_

Date Received: 10/21/98

% Solids:

\_92.6

CAS No.	Analyte	Concentration	С	Q	M
ļ	!		_ !		!!
7429-90-5	Aluminum_:	4230	_		P_
7440-36-0	Antimony_	9.1	U		P_
7440-38-2	Arsenic	1.5	В	WN	F_
7440-39-3	Barium	51.7	_		P_
7440-41-7	Beryllium	0.13	ן טן		{ P {
7440-43-9	Cadmium	0.99	ן ט		P_
7440-70-2	Calcium	586	В		P_
7440-47-3	Chromium	5.5			P_
7440-48-4	Cobalt	3.4	B		P_
7440-50-8	Copper	35.1			P :
7439-89-6	Iron	4780	i — i		P_
7439-92-1	Lead	21.1	i — i		F
7439-95-4	Magnesium	559	B		P
7439-96-5	Manganese	317	i		P
7439-97-6	Mercury	0.05	Ū		CV
7440-02-0	Nickel	8.1	В		P
7440-09-7	Potassium	200	Ìυ		$P^{-}$
7782-49-2	Selenium		Ū	<del></del>	F
7440-22-4	Silver	1.1	Ū	¦	P
7440-23-5	Sodium	34.3	В		$P^{-}$
7440-28-0	Thallium		ָּט	·	F
7440-62-2	Vanadium	10.1	В	¦ ———	P
7440-66-6	Zinc	58.3	. —	!	P-
1,340 00 0	Cyanide	4.2	-	!	CĀ
	Cyanade	\	\ -	¦	CA
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Color Before:	BROWN	Clarity Before:		Texture:	MEDIUN
Color After:	YELLOW	Clarity After:	<del></del>	Artifacts:	
Comments:					
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# INORGANIC ANALYSES DATA SHEET

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MEBQF8	i
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Lab Name: SVL\_ANALYTICAL\_INC.\_\_\_\_ Contract: 68-D5-0138

Lab Code: SILVER Case No.: 26593 SAS No.: \_\_\_\_ SDG No.: MEBQF5\_\_

Matrix (soil/water): SOIL\_

Lab Sample ID: MEBQF8

Level (low/med):

LOW\_\_\_

Date Received: 10/21/98

% Solids:

92.2

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CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	5670			P
7440-36-0	Antimony	9.2	ับิ		$\mathbf{P}^{-}$
7440-38-2	Arsenic	1.4	В	WN	F
7440-39-3	Barium	55.1	į		$ \mathbf{P}^{-} $
7440-41-7	Beryllium	0.13	<u></u>		P
7440-43-9	Cadmium	1.2			P
7440-70-2	Calcium	710	B		P
7440-47-3	Chromium	7.0	i i		$ P^- $
7440-48-4	Cobalt	3.3	B		P
7440-50-8	Copper	37.2			P
7439-89-6	Iron	5330	i — i		$P^-$
7439-92-1	Lead	28.9	i —		F
7439-95-4	Magnesium	766	$\overline{\mathbf{B}}$		P
7439-96-5	Manganese	319	ĺ		P_
7439-97-6	Mercury	0.07	B	i ———	CV
7440-02-0	Nickel	8.1	В	i	P
7440-09-7	Potassium	297	B	i	P
7782-49-2	Selenium	0.13	U		F
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	45.5	B		P_
7440-28-0	Thallium	0.09	U	1	F
7440-62-2	Vanadium	10.4	B		P
7440-66-6	Zinc	68.9	1_		P_
	Cyanide	0.58	1_	1	CA
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Comments:			
Color After	: YELLOW	Clarity After:	Artifacts:
Color Before	e: BROWN	Clarity Before:	Texture: MEDIUM

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Lab	Name:	SVL_	_ANALYTICAL_	INC	Contract:	68-D5-0138	Ì
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Lab Code: SILVER Case No.: 26593 SAS No.: SDG No.: MEBQF5

Matrix (soil/water): SOIL\_ Lab Sample ID: MEBQF9

Level (low/med): LOW\_\_ Date Received: 10/21/98

% Solids: 94.9

CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	3610	-		P
7440-36-0	Antimony	8.9	บิ		P
7440-38-2	Arsenic	1.2	В	WN	F
7440-39-3	Barium —	48.7			P
7440-41-7	Beryllium	0.13	ਹ		P
7440-43-9	Cadmium	0.97	U	i	P
7440-70-2	Calcium	361	В		P_
7440-47-3	Chromium_	5.5	İ 		P_
7440-48-4	Cobalt	3.1	B	l	{P_
7440-50-8	Copper	38.1	!_		P_ }
7439-89-6	Iron	4290			P
7439-92-1	Lead	16.3		i	F_
7439-95-4	Magnesium	503	В	! !	P_
7439-96-5	Manganese	169	]_	}	P_
7439-97-6	Mercury	0.05	Ü	1	CV
7440-02-0	Nickel	6.0	U	l	P_
7440-09-7	Potassium	238	B	1	P_
7782-49-2	Selenium_	0.13	U	1	F_
7440-22-4	Silver	1.1	U		P_
7440-23-5	Sodium	39.3	B	1	P_
7440-28-0	Thallium	0.08	U		F_
7440-62-2	Vanadium_	9.5	¦Β		P_
7440-66-6	Zinc	50.1	!_		P_
1	Cyanide_	4.9	!_		(CA
	i				11

Color Before:	BROWN	Clarity Before:	Texture: MEDIUM
Color After:	YELLOW	Clarity After:	Artifacts:
Comments:			

### U.S. EPA - CLP

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INORGANIC	ANALYSES	DATA	SHEET

EPA	SAMPLE	NO
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 ·
MEBQG0

Lab Name: SVL\_ANALYTICAL\_INC.\_\_\_\_ Contract: 68-D5-0138

Case No.: 26593 SAS No.: \_\_\_\_\_ SDG No.: MEBQF5\_

Matrix (soil/water): SOIL\_

Lab Sample ID: MEBQG0

Level (low/med):

Lab Code: SILVER

LOW\_\_\_

Date Received: 10/21/98

% Solids:

93.3

CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	3320	-		P
7440-36-0	Antimony	9.0	<u></u>		P
7440-38-2	Arsenic	0.64	В	WN	F
7440-39-3	Barium	24.7	В		P
7440-41-7	Beryllium	0.13	U		P
7440-43-9	Cadmium	0.99	ָ ט		P
7440-70-2	Calcium	535	В		P
7440-47-3	Chromium	7.6			P
7440-48-4	Cobalt	1.7	ับิ		P
7440-50-8	Copper	12.7			P
7439-89-6	Iron	3330	<del></del>		P
7439-92-1	Lead	8.0	-	S	F
7439-95-4	Magnesium	678	B		P
7439-96-5	Manganese	86.6	1		P
7439-97-6	Mercury	0.05	บิ	<del></del>	CV
7440-02-0	Nickel	6.1	U	i ————	P
7440-09-7	Potassium	198	U	i	P
7782-49-2	Selenium	0.13	U		F
7440-22-4	Silver	1.1	U	i	P
7440-23-5	Sodium	29.8	В	i	P
7440-28-0	Thallium	0.09	ָן ט	i	F
7440-62-2	Vanadium_	10.9	į	i	P
7440-66-6	Zinc	24.9	<u> </u>	i —————	P
	Cyanide	0.16	B	i	CA

Color B	etore:	BROWN	Clarity	Before:	<del></del>	Texture:	MEDIUM
Color A	fter:	YELLOW	Clarity	After:		Artifacts:	
Comment	s:						
							<del></del>

12

# 1 INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	NO.
<u> </u>		

Lab	Name:	SVL_ANALYTICA	AL_INC	Contract: 6	8-D5-0138	MERÕG]	
Lab	Code:	SILVER	Case No.: 2.659	3_ SAS No.	:	SDG No.:	MEBQF5_

Matrix (soil/water): SOIL\_ Lab Sample ID: MEBQG1

Level (low/med): LOW\_\_ Date Received: 10/21/98

% Solids: \_\_75.3

CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	4120	-		P
7440-36-0	Antimony	11.2	<u></u>		$\mathbf{P}^{-}$
7440-38-2	Arsenic	0.83	В	WN	F
7440-39-3	Barium	115			$_{\rm P}^-$
7440-41-7	Beryllium	0.33	B		$_{\rm P}^{-}$
7440-43-9	Cadmium		Ū		P
7440-70-2	Calcium	32700			$P^-$
7440-47-3	Chromium	14.6	<del>-</del>		$\mathbf{P}^{-}$
7440-48-4	Cobalt	4.3	B		P
7440-50-8	Copper	2110	į		$P^{-}$
7439-89-6	Iron	9410	-		P
7439-92-1	Lead	191	i – i		F
7439-95-4	Magnesium	3880	i — i		P
7439-96-5	Manganese	539	i — i		P
7439-97-6	Mercury	0.25	-		CV
7440-02-0	Nickel	8.0	B		P
7440-09-7	Potassium	278	В		P
7782-49-2	Selenium	0.16	U	W	F
7440-22-4	Silver	1.4	U	<del></del>	P_
7440-23-5	Sodium	83.7	В		P
7440-28-0	Thallium	0.11	U		F_
7440-62-2	Vanadium	11.3	В		P_
7440-66-6	Zinc	161	1	l	P_
1	Cyanide	0.14	¦B		CA
	İ	1	1_	l	·

Color	Before:	BROWN	Clarity	Before:		Texture:	MEDIUM
Color	After:	YELLOW	Clarity	After:		Artifacts:	
Commer	nts:						
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### INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	ИО
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Lab Name: SVL\_ANALYTICAL\_INC.\_\_\_\_ Contract: 68-D5-0138

Lab Code: SILVER Case No.: 26593 SAS No.: \_\_\_\_ SDG No.: MEBQF5\_\_

Matrix (soil/water): SOIL\_

Lab Sample ID: MEBQG2

Level (low/med):

Date Received: 10/21/98

% Solids:

\_95.9

CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	4500	-		P
7440-36-0	Antimony -	8.8	٠ '		$_{ m P}^{-}$
7440-38-2	Arsenic		В	WN	F
7440-39-3	Barium	36.2	В		$_{\rm P}^{-}$
7440-41-7	Beryllium	0.13			P_
7440-43-9	Cadmium	0.96	ָ ט		P
7440-70-2	Calcium	2840			P
7440-47-3	Chromium	6.7	-		$P^{-1}$
7440-48-4	Cobalt	3.0	B		P_
7440-50-8	Copper	18.7			P
7439-89-6	Iron	4680	i – i		$_{\rm P}^{-}$
7439-92-1	Lead	19.6	-		$ F^- $
7439-95-4	Magnesium	1180	<u>;                                    </u>		P
7439-96-5	Manganese	170	_		P
7439-97-6	Mercury	0.06	B		CV
7440-02-0	Nickel	5.9	:	i ————	P
7440-09-7	Potassium	277	В	i	$P^{-}$
7782-49-2	Selenium	0.13	U		F
7440-22-4	Silver	1.1	•	i ———	P
7440-23-5	Sodium	40.5	В	i ——	$ P^- $
7440-28-0	Thallium	0.08		i ———	F
7440-62-2	Vanadium	9.9	:		$ P^- $
7440-66-6	Zinc	49.8	į	i ———	P
	Cyanide	0.12	: —	<u> </u>	CA
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Comments:			
Color After:	YELLOW	Clarity After:	Artifacts:
Color Before:	BROWN	Clarity Before:	Texture: MEDIUM



## l INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	NO.	
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Lab	Name:	SVL_ANALYTICA	AL_INC	Contract:	68-D5-0138	l 		
Lab	Code:	SILVER	Case No.: 265	93_ SAS N	lo.:	SDG No.:	MEBQF5_	

Matrix (soil/water): SOIL\_\_ Lab Sample ID: MEBQG3

Level (low/med): LOW\_\_ Date Received: 10/21/98

% Solids: \_88.7

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CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	2630	-		$\left  \frac{1}{P} \right $
7440-36-0	Antimony	9.5	Ū		P
7440-38-2	Arsenic	0.60	В	WN	F
7440-39-3	Barium	43.7			P
7440-41-7	Beryllium	0.14	U		$P^{-}$
7440-43-9	Cadmium	1.0	ָּט		P
7440-70-2	Calcium	9350			$P^-$
7440-47-3	Chromium	15.5	i – i		$P^{-}$
7440-48-4	Cobalt	3.0	B		P
7440-50-8	Copper	25.3			P
7439-89-6	Iron	3920	i – i		P
7439-92-1	Lead	127	<u> </u>		F
7439-95-4	Magnesium	1650	-		$P^{-}$
7439-96-5	Manganese	184	i — i		P_
7439-97-6	Mercury_	0.11	$\overline{\mathtt{B}}$		CV
7440-02-0	Nickel	9.8			P
7440-09-7	Potassium	210	B	i	P
7782-49-2	Selenium	0.14	U		F
7440-22-4	Silver	1.2	:		P
7440-23-5	Sodium	43.0	В	i ———	P
7440-28-0	Thallium	0.09	U	<u> </u>	F
7440-62-2	Vanadium	8.0	1	<u> </u>	P
7440-66-6	Zinc	249	. —	i ———	P
	Cyanide	0.11	ี่ซิ		CA
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Color	Before:	BROWN	Clarity	Before:	 Texture:	MEDIUM
Color	After:	YELLOW	Clarity	After:	 Artifacts:	
Commer AR		PIECE_OF_PLASTI	C		 	

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# 1 INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	NO
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Lab Name: SVL\_ANALYTICAL\_INC.\_\_\_\_ Contract: 68-D5-0138

Case No.: 26593 SAS No.: \_\_\_\_\_ SDG No.: MEBQF5\_\_

Matrix (soil/water): SOIL\_

Lab Sample ID: MEBQG7

Level (low/med):

Lab Code: SILVER

LOW\_\_\_

Date Received: 10/21/98

% Solids:

\_96.1

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CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	2260		<del></del>	P
7440-36-0	Antimony_	8.8	บิ		P
7440-38-2	Arsenic	1.1	В	WN	F
7440-39-3	Barium —	13.8	В		P
7440-41-7	Beryllium	0.25	В		P
7440-43-9	Cadmium	0.96	U		P
7440-70-2	Calcium	1060			P
7440-47-3	Chromium	5.1	_		P_
7440-48-4	Cobalt	2.8	В		P_
7440-50-8	Copper	6.2			P_
7439-89-6	Iron	4080			P_
7439-92-1	Lead	6.1			F_
7439-95-4	Magnesium	853	B		P_
7439-96-5	Manganese	128	_		P_
7439-97-6	Mercury	0.05	ן ט	l	CV
7440-02-0		5.9	U	i !	P_
7440-09-7	Potassium	193	ט	ļ	P_
7782-49-2			U	! 	F_
7440-22-4	•	1.1	U	!	P_
7440-23-5	• ——	·	В	! !	P_
7440-28-0	Thallium_	0.08		! !	F_
7440-62-2	Vanadium_	6.5	•	! !	P_
7440-66-6	Zinc	22.8	· —		P_
1	Cyanide	0.17	В	! !	CA
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Comment	ts:						
Color 1	After:	YELLOW	Clarity	After:	·	Artifacts:	
Color F	Before:	BROWN	Clarity	Before:	<del></del>	Texture:	WEDIUM

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## INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	ио.

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Lab	Name:	SVL	_ANALYTICAL	_INC	Contract:	68-D5-0138
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Lab Code: SILVER Case No.: 26593 SAS No.: \_\_\_\_ SDG No.: MEBQF5

Matrix (soil/water): SOIL\_

Lab Sample ID: MEBQG8

Level (low/med):

LOW

Date Received: 10/21/98

% Solids:

\_96.6

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CAS No.	Analyte	  Concentration	С	Q	М
7429-90-5	Aluminum	1360	-		P
7440-36-0	Antimony	8.7	บิ		$P^-$
7440-38-2	Arsenic	0.70	В	WN	$\mathbf{F}^{-}$
7440-39-3	Barium	8.0	: :		$\mathbf{P}^{-}$
7440-41-7	Beryllium	0.12	ָ ט		P
7440-43-9	Cadmium	0.95	<b>ט</b>		$\mathbf{P}^{-}$
7440-70-2	Calcium	2990			$P^-$
7440-47-3	Chromium	3.3	<u> </u>		$_{\rm P}^-$
7440-48-4	Cobalt	3.5	В		$_{\rm P}^-$
7440-50-8	Copper	4.6			$_{\rm P}^-$
7439-89-6	Iron	2470			$_{\rm P}^{-}$
7439-92-1	Lead	5.4	_		F
7439-95-4	Magnesium	1920	i – i		P
7439-96-5	Manganese	47.4	_		P-
7439-97-6	Mercury	0.05	ับ		CV
7440-02-0	Nickel	5.9	U		P
7440-09-7	Potassium	192	U		P _
7782-49-2	Selenium	0.12			F
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	30.5	B		$ \mathbf{P}^- $
7440-28-0	Thallium	0.08		i ——	F
7440-62-2	Vanadium	5.6	•	i	P
7440-66-6	Zinc	15.1	į	i	P
į	Cyanide	0.18	B	i	CA
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' <del></del>	· ' <del> </del>	· ——————	. —		

Color Before:	BROWN	Clarity	Before:	 Texture:	MEDIU
Color After:	YELLOW	Clarity	After:	 Artifacts:	<del>,</del>
Comments:					
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## INORGANIC ANALYSES DATA SHEET

EPA S	SAMPLE	NO
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Lab	Name:	SVL	_ANALYTICAL	_INC.		Contract:	68-D5-0138
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Lab Code: SILVER Case No.: 26593 SAS No.: \_\_\_\_ SDG No.: MEBQF5\_

Matrix (soil/water): SOIL\_

Lab Sample ID: MEBQG9

Level (low/med): LOW\_\_

Date Received: 10/21/98

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% Solids:

95.7

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CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	2280	-		P
7440-36-0	Antimony_	8.8	ָ <u></u> ֖֖֓		P
7440-38-2	Arsenic	0.90	В	WN	F
7440-39-3	Barium	14.2	: :		P
7440-41-7	Beryllium	0.13	ָט ¦		P
7440-43-9	Cadmium	0.96	ָ ט		P
7440-70-2	Calcium	1510	i		P
7440-47-3	Chromium	6.3	_		P
7440-48-4	Cobalt	3.4	B		P
7440-50-8	Copper	12.5			P
7439-89-6	Iron	4570	_		P
7439-92-1	Lead	7.1	i —		F
7439-95-4	Magnesium	1140	i – i		P
7439-96-5	Manganese	52.9	i —		P
7439-97-6	Mercury	0.05	Ū		CV
7440-02-0	Nickel	5.9	U		P
7440-09-7	Potassium	194	U		P
7782-49-2	Selenium	0.13	U		F
7440-22-4	Silver	1.1	įυ		P
7440-23-5	Sodium	61.5	B		¦ P
7440-28-0	Thallium	0.08	U	1	F
7440-62-2	Vanadium	9.2	B		P
7440-66-6	Zinc	38.9	İ		P
į	Cyanide	0.25	B	i	CA
	i -		1_		İ
· <del></del>		· —	_		

Color Before:	BROWN	Clarity Before:	Texture: MEDIUM
Color After:	YELLOW	Clarity After:	Artifacts:
Comments:			

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## INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	NO.
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					MEBOH3	
Lab	Name:	SVL_ANALYTICAL_INC	Contract:	68-D5-0138		ı

Lab Code: SILVER Case No.: 26593 SAS No.: SDG No.: MEBQF5

Matrix (soil/water): SOIL\_ Lab Sample ID: MEBQH3

Level (low/med): LOW\_\_\_ Date Received: 10/22/98

% Solids: \_94.1
Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	2480	-		P_
7440-36-0	Antimony_	9.0	<u></u> ַਹ		P_
7440-38-2	Arsenic	1.1	B	WN	F_
7440-39-3	Barium	14.1	В		P
7440-41-7	Beryllium	0.13			P_
7440-43-9	Cadmium_	0.98	ับ		P_
7440-70-2	Calcium_	19600	[_	l	P_
7440-47-3	Chromium	5.7	_		P_
7440-48-4	Cobalt_	3.1	В		P_
7440-50-8	Copper	9.2	_		P_
7439-89-6	Iron	4750			P_
7439-92-1	Lead	6.7			F_
7439-95-4	Magnesium	2380	<u> </u>		P_
7439-96-5	Manganese	172	! _		P_
7439-97-6	Mercury	0.05	ָט ¦		CV
7440-02-0	Nickel	7.0	В		P_
7440-09-7	Potassium	264	В		[P_
7782-49-2	Selenium	0.13	U	l	F
7440-22-4	Silver	1.1	U	! !	P_
7440-23-5	Sodium	36.2	В		P
7440-28-0	Thallium	0.09	U		F
7440-62-2	Vanadium	7.2	B	i 1	P
7440-66-6	Zinc	26.2	İ	1	P
 	Cyanide	0.56		1	CA
	1		1	1	!

Color Before:	BROWN	Clarity Before: _	•·	Texture:	MEDIUM
Color After:	YELLOW	Clarity After: _		Artifacts:	
Comments:					
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# INORGANIC ANALYSES DATA SHEET

EPA	SAMPLE	NO.
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Lab Name: SVL_ANALYT	TCAT. TNC	Con	tract: 6	8-D5-0138	H MEBQH	4
Lab Name: SVL_ANADII	icab_inc		cruot. o	0 23 0130		1
Lab Code: SILVER	Case No.:	26593_	SAS No.	:	SDG No.:	MEBQF5_
Matrix (soil/water):	SOIL_			Lab Sample	e ID: MEB	QH4
Level (low/med):	LOW			Date Recei	ived: 10/	22/98
& Solids:	94.5					

CAS No.
7440-36-0       Antimony       8.9 U       P         7440-38-2       Arsenic       1.7 B       SN       F         7440-39-3       Barium       13.4 B       P         7440-41-7       Beryllium       0.13 U       P         7440-43-9       Cadmium       0.97 U       P         7440-70-2       Calcium       2650       P         7440-47-3       Chromium       5.4       P         7440-48-4       Cobalt       2.8 B       F
7440-38-2       Arsenic       1.7 B       SN       F         7440-39-3       Barium       13.4 B       F         7440-41-7       Beryllium       0.13 U       F         7440-43-9       Cadmium       0.97 U       F         7440-70-2       Calcium       2650       F         7440-47-3       Chromium       5.4       F         7440-48-4       Cobalt       2.8 B       F
7440-38-2   Arsenic
7440-41-7   Beryllium
7440-43-9   Cadmium
7440-43-9   Cadmium
7440-47-3   Chromium   5.4   F   F   7440-48-4   Cobalt   2.8   B   F   F   F   F   F   F   F   F   F
7440-48-4 Cobalt
7440-50-8   Copper   9.1   F
7439-89-6 Iron 4610 F
7439-92-1 Lead 6.7 F
7439-95-4 Magnesium 1410 F
7439-96-5 Manganese 144 F
7439-97-6 Mercury 0.06 B
7440-02-0 Nickel 9.5
7440-09-7   Potassium   196   U     E
7782-49-2   Selenium   0.13   U   W   H
7440-22-4   Silver   1.1   U     I
7440-23-5   Sodium   37.6   B
7440-28-0   Thallium   0.08   U
7440-62-2   Vanadium   8.8   B
7440-66-6 Zinc
Cyanide

<u> </u>						
Commen	its:					
Color	After:	YELLOW	Clarity	After:	 Artifacts:	
Color	Before:	BROWN	Clarity	Before:	 Texture:	MEDIUM

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#### U.S. EPA - CLP

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INORGANIC	ANALYSES	DATA	SHEET

EPA	SAMPLE	NO.	
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Lab	Name:	SVL_ANALYTICA	AL_INC	Contract:	68-D5-0138	MEBQH:	
Lab	Code:	SILVER	Case No.: 2659	3_ SAS N	0.:	SDG No.:	MEBQF5

Matrix (soil/water): SOIL\_ Lab Sample ID: MEBQH5

Level (low/med): LOW\_\_ Date Received: 10/22/98

% Solids: \_95.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	2120	-		P
7440-36-0	Antimony	8.8	ับ		P
7440-38-2	Arsenic	0.80	B	WN	F_
7440-39-3	Barium	12.1	В		P_
7440-41-7	Beryllium	0.13	ָט¦		\P_
7440-43-9	Cadmium	0.96	ן ט		P
7440-70-2	Calcium	12600			$ P^- $
7440-47-3	Chromium	5.2	-		P
7440-48-4	Cobalt	2.8	В		P
7440-50-8	Copper	8.0			P
7439-89-6	Iron	3620			P
7439-92-1	Lead	6.0	-		F
7439-95-4	Magnesium	3500	-		P
7439-96-5	Manganese	62.6	-		P
7439-97-6	Mercury	0.05	ับ		CV
7440-02-0	Nickel	5.9	็บ		P
7440-09-7	Potassium	194	U		P
7782-49-2	Selenium	0.13	ับ	W	F
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	32.6	В		P
7440-28-0	Thallium	0.08			F
7440-62-2	Vanadium	7.6	1	i	P
7440-66-6	Zinc	24.1	İ	i	P
1	Cyanide	0.58	i –		CA
	1	1	1_		1

Color Before:	BROWN	Clarity Before:	Texture:	MEDIUM
Color After:	YELLOW	Clarity After:	Artifacts	:
Comments:				

FORM I - IN

	1		EPA SAMPLE NO.
	INORGANIC ANALYSES DATA	SHEET !	
Lab Name: SVL_ANALYT	ICAL_INC Contract: 6	8-D5-0138	MEBQJ1
Lab Code: SILVER	Case No.: 26593_ SAS No.	:	SDG No.: MEBQF5_
<pre>Matrix (soil/water):</pre>	WATER	Lab Sample	e ID: MEBQJ1
Level (low/med):	LOW	Date Recei	ved: 10/22/98
% Solids:	0.0		

CAS No.	Analyte	Concentration	С	Q	M
7429-90-5	Aluminum	26.0	ับ		P
7440-36-0	Antimony	42.2	U		$_{\rm P}^-$
7440-38-2	Arsenic	0.90	U	N	F
7440-39-3	Barium	1.9	: :		$P^{-}$
7440-41-7	Beryllium	0.60	ָ ט		$_{\rm P}^{-}$
7440-43-9	Cadmium	4.6	, ,		P-
7440-70-2	Calcium	68.4			$P^-$
7440-47-3	Chromium	7.0	: :		$\mathbf{P}^{-}$
7440-48-4	Cobalt	7.8	ָט		$P^{-1}$
7440-50-8	Copper	4.1			P
7439-89-6	Iron	12.8			$_{\rm P}^{-}$
7439-92-1	Lead	0.50			$_{\rm F}^-$
7439-95-4	Magnesium	50.1			P-
7439-96-5	Manganese	2.9	U		$P^{-}$
7439-97-6	Mercury	0.10	U		cv
7440-02-0	Nickel	28.3	: '		P
7440-09-7	Potassium	926	Ū		P_
7782-49-2	Selenium	0.60	U	N	F
7440-22-4	Silver	5.3	U	i — —	P
7440-23-5	Sodium	81.6	U	!	P
7440-28-0	Thallium	0.40	¦ U	1	F_
7440-62-2	Vanadium	12.3	U		P_
7440-66-6	Zinc	11.2	B		P
	Cyanide	12.0	1		CA
1	1	1	_		1

Color After: Comments:	COLORLESS	Clarity After:	CLEAR_	Artifacts:
g-1 3.54 .	COT ORT TICE	01	OT EAD	n-+:6+
Color Before:	COLORLESS	Clarity Before:	CLEAR_	Texture:

	1		
INORGANIC	ANALYSES	DATA	SHEET

EPA	SAMPLE	NO.

MEBQJ2

Lab	Manie.	3VII_MMADITICA	The	concrace. oo	D3 0130	11
- 1	Cada.	CTIVED	Cago No . 26593	SAS No.		SDG No · MERCES

Matrix (soil/water): WATER Lab Sample ID: MEBQJ2

Level (low/med): LOW\_\_ Date Received: 10/22/98

% Solids: \_\_0.0

CAS No.	Analyte	Concentration	С	Q	М
7429-90-5	Aluminum	58.0	B		P
7440-36-0	Antimony	42.2	U		P
7440-38-2	Arsenic	1.0	В	WN	F
7440-39-3	Barium	192	В		P
7440-41-7	Beryllium	0.60	U		P_
7440-43-9	Cadmium	4.6	¦ ប ¦		P
7440-70-2	Calcium	609000			P
7440-47-3	Chromium	7.0	ן ט		P_
7440-48-4	Cobalt	7.8	ן ט ן		P_
7440-50-8	Copper	4.1	ן U		P_
7439-89-6	Iron	4490	i i		P
7439-92-1	Lead	0.50	ן ט		F
7439-95-4	Magnesium	52700	i i		P_
7439-96-5	Manganese	662	<u>                                     </u>		P_
7439-97-6	Mercury	0.10	¦ טּ		¦CV¦
7440-02-0	Nickel	28.3	ָט ¦		P_
7440-09-7	Potassium	25200	 		P_
7782-49-2	Selenium	6.0	¦ שׁ ¦	WN	F_
7440-22-4	Silver	5.3	ָט ¦		P_
7440-23-5	Sodium	179000	1_	i	$\{P_{-}^{-}\}$
7440-28-0	Thallium	0.40	ן <del>ប</del>		F_
7440-62-2	Vanadium	12.3	ָט ¦		$\mathbf{P}^{-}$
7440-66-6	Zinc	3.2	U		P_
i	Cyanide	31.9	1_	l	CA
1		l	!_	l	1

Comme	nts:						
Color	After:	COLORLESS	Clarity	After:	CLEAR_	Artifacts:	
Color	Before:	COLORLESS	Clarity	Before:	CLEAR_	Texture:	

#### Semivolatile Analysis Data - ECMQ9 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMMO LABORATORY: IEA-NJ

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.60	4.000	
	UNKNOWN PROPENE, TRICHLORO ISOMER	5.85 5.93	6.000 24.000	
	UNKNOWN ACID	10.37 16.37	3.000 2.000	
FILE NAME	: ECMMO.SDG DATE: 11/19/98 TIME: 09:47 CADRE98		PAGE:	13

Semivolatile Analysis Data - ECMR1 Tentatively Identified Compounds  CASE NO: 26593 LABORATORY: IEA-NJ  SDG NO: ECMMO  CAS COMPOUND ESTIMATED						
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION			
	UNKNOWN	4.32	4.000			
	PROPENE TRICHLORO ISOMER UNKNOWN	4.53 4.60	3.000 6.000			
	PROPENE TRICHLORO ISOMER	5.11	3.000			
	UNKNOWN	5.79 5.85	4.000 15.000			
	PROPENE, TRICHLORO ISOMER	5.93	63.000			
LE NAME:	ECMMO.SDG DATE: 11/19/98 TIME: 09:47 CADRE98		PAGE:			

Semivolatile Analysis Data - ECMM4
Tentatively Identified Compounds
CASE NO: 26593
LABORA

SDG NO: ECMMO

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION Q
	UNKNOWN ALCOHOL	4.15	3.000
	UNKNOWN	4.29	3.000
	ALDOL CONDENSATION PRODUCT	4.58	5.000
	PROPENE TRICHLORO ISOMER	5.91	7.000
	UNKNOWN ALCOHOL	6.77	2.000
	UNKNOWN ACID	10.33	2.000
	UNKNOWN ALCOHOL	11.22	5.000
	UNKNOWN	11.38	11.000
	UNKNOWN ACID	11.46	3.000
	UNKNOWN	13.84	2.000
	UNKNOWN	14.00	4.000
	UNKNOWN	14.05	3.000
	UNKNOWN	16.33	3.000
FILE NAME	: ECMMO.SDG DATE: 11/19/98 TIME: 09:47 CADRE98		PAGE: 1

CASE NO: SDG NO:	CÔMPOUND NAME   ESTIMATED			
CAS NUMBER	COMPOUND	RT	ESTIMATED CONCENTRATION C	
			4.000	
			9.000	
		•		
			7.000	
	PROPENE TRICHLORO ISOMER		34.000	
	UNKNOWN	7.48	9.000	

#### Semivolatile Analysis Data - SBLKH6 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMMO

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION Q
	UNKNOWN	5.85	2.000
FILE NAME	ECMMO.SDG DATE: 11/19/98 TIME: 09:47 CADRE98		PAGE: 17

ESTIMATED	
RT CONCENTRATION	c
7.42 5.000	
11.62 2.000	
13.74 43.000	
17.36 3.000	
	9.46 2.000 10.20 4.000 11.62 2.000 13.74 43.000

	Semivolatile Analysis Data -   Tentatively Identified Comp	ounds	
CASE NO: SDG NO:	_	LABORATORY: IEA-NJ	
CAS NUMBER	. COMPOUND NAME	RT	ESTIMATED CONCENTRATION
	UNKNOWN ALCOHOL	4.09	4.000
	UNKNOWN	4.23	6.000
	UNKNOWN ALCOHOL	5.68	2.000
	UNKNOWN ACID	10.32	2.000
	UNKNOWN	19.07	4.000
ILE NAME:	ECMMO.SDG DATE: 11/19/98 TIME: 09:47 CADRE98		PAGE:

Case #: 26593

SDG: ECMM0

Site:

HIMCO DUMP, ELKHART

Lab. : Reviewer: IEANJ

Reviewer: Date:

Sample Number:	ECMM3		ECMM4		ECMM5		ECMQ0		ECMQ1	
Sampling Location:	TRIP BLA	ANK	WT114A		WT101A		WT101A		TRIP BLANK	
Matrix:	Water		Water		Water		Water		Water	
Units:	ug/L		ug/L		l ug/L		l ug/L		¦ ug/L	
Date Sampled:	10/20/98	3	10/20/98		10/21/98		10/21/98		10/01/98	
#Moisture:			1				[		1	
PH:			1	,	1				1	
Dilution Factor:	1.0		1.0		] 1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Chloromethane		_w	_10_		10_		10_		10_	_ <u>_w</u>
Bromomethane	1_10_	_W	10_	_w	10_	_W <b>_</b> _	[ _10_	_W	1_10_	_เม
Vinyl Chloride	_10_	_w	! _10_	_U	_10_	_U	_10_	_U	1_10_	_w
Chloroethane	_10_	_w <b>_</b>	[ _10_	_U	1 _10_	_U	[ _10_	_U	1 _10_	_w
Methylene Chloride	_10_	_w	_10_	_U	_10_	_U	1_10_	_U	_10_	_w
Acetone	_10_	_w_`	1_10_	_U	_10_	_U	1 _10_	_U	_10_	_W
Carbon Disulfide	_10_	_W	1_10_	_U	1_10_	_U	1_10_	_U	1_10_	_UJ
1.1-Dichloroethene	10_	_w	1 _10_	_U	_10_	_U	1_10_	_U	1_10_	_UJ
1.1-Dichloroethane	_10_	_w <b></b>	_4_	_J	_10_	_U	_10_	_U	_10_	_სᲐ
Total 1.2-Dichloroethene	1_10_	_w	_10_	_U	1_10_	_U	1_10_	_U	10_	_w
Chloroform	_10_	_w	1 _10_	_U	1 _10_	_U	_10_	_U	_10_	_UJ
1.2-Dichloroethane	10_	_w	_10_	_U	10_	_U	10_	_U	_10_	_เภ
2-Butanone	1_10_	_w	10_	_w	_10_	_W	1_10_	_w	1 _10_	_W
1.1.1-Trichloroethane	1_10_	_m	1 _10_	_U	_10_	_U	1_10_	_U	10_	_W
Carbon Tetrachloride	_10_	_w <u></u>	1_10_	_U	1_10_	_U	10_	_U	_10_	_UJ
Bromodichloromethane	1_10_	_w	1_10_	_U	_10_	_U	_10_	_U	1_10_	_w
1.2-Dichloropropane	1_10_	_03	_10_	_U	_10_	_U	_10_	_U	1_10_	_W
Cis-1.3-Dichloropropene	_10_	_w	10_	_U	_10_	_U	_10_	_U	_10_	_UJ
Trichloroethene	1 _10_	_W	1 _10_	_U	[ _10_	_U	10_	_U	_10_	_W
Dibromochloromethane	1_10_	_w		_U	1 _10_	_U	10_	_U	10_	_w
1.1.2-Trichloroethane	! _10_	_w <u></u>	1 _10_	_n	1 _10_	_U	1 _10_	_U	1 _10_	_w
Benzene	_10_	_w <b>_</b>	_10_	_U	_10_	_U	1_10_	_U	1_10_	_w
Trans-1.3-Dichloropropene	J _10_	_w <b>_</b>	1_10_	_U	_10_	_U	_10_	_U	1_10_	_W
Bromoform	_10_	_w	1 _10_	_U	_10_		1 _10_		J _10_	_UJ
4-Methy1-2-pentanone	_10_	_W	10_	_U	1_10_	_U	10_	_U	_10_	_w
2-Hexanone	_10_	_w	_10_	_U	_10_	_U	1 _10_	_U	_10_	_w
Tetrachloroethene	_10_	_w	_10_	_U	_10_	_U	_10_	_U	_10_	_w
1.1.2.2-Tetrachloroethane	_10_	_w		_U			1_10_		_10_	_w
Toluene	1_10_	_w		_U			10_		1 _10_	_m
Chlorobenzene	_10 <u>-</u> .	· _m			1_10_		_10_	_U		_w
Ethylbenzene	_10_	_w			_10_	_U	1_10_	_U	_10_	_w
Styrene	1_10_	_w_			1_10_	_U	_10_	_U	1_10_	_w
Xylene (total)	_10_	_w_	1_10_	_U	_10_	_U	_10_	_U	_10_	_W



Case #: 26593

SDG: ECMMO

IEANJ

Site: Lab. :

HIMCO DUMP, ELKHART

Reviewer:

Date:

Cample Number:	ECMMO		ECMMOMS		ECMMOMSD		ECMM1		ECMM2	
Sample Number: Sampling Location:	! WT102A		WT102A		ECMMUMSU   WT102A		TRIP BLAN		ECHM2   WT112A	
Matrix:	Water		Water		Wiloza   Water		Water		Water	
	•		'				•		water   ug/L	
Units:	ug/L   10/19/98	1	ug/L		ug/L		ug/L   10/02/98	•	10/20/98	
Date Sampled:	1 10/19/90	)	10/19/98		10/19/98		1 10/02/30		1 10/20/30	
%Moisture: PH:	1		1		1		1		ł L	
rn: Dilution Factor:	1 1.0		1 1 0		1 1 0		1 1 0		1   1.0	
DITULION FACLUE:	1.U		1.0 		1.0 		† 1.0 		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Chloromethane	10_		10_	<u> _U</u>	1		1_10_	- <u>_w_</u>	10_	_U_
Bromomethane	_10_	_w		_w		_07		_w		_UJ_
Vinyl Chloride	.  _10_	_U	_10_	_U		_U	_10_	_w	1_10_	_U
Chloroethane	_10_	_U	1 _10_	_U	10_		1_10_	_w	_10_	_U
Methylene Chloride	1_10_	_U	_10_	_U	1_10_		] _10_		10_	_U_
Acetone	1_10_	_U	1_10_	_U		_U	10_	_w		_U
Carbo: Disulfide	1_10_	_U		U			1 _10_	_w		_U
1.1-Dichloroethene	1_10_		_41_		43_		1_10_	_w	-	_U_
1.1-Dichloroethane	1_10_		1_10_	_U		U		_w		_U_
Total 1.2-Dichloroethene	1_10_		1_10_	_U				_w		_U_
Chloroform	_10_							_w		_U_
1.2-Dichloroethane	1_10_	U		_υ				_ບງ		_U_
2-Butanone	1_10_	_w		_UJ		_m_		_W		_UJ_
1.1.1-Trichloroethane	_10_		1 _10_	_U			] _10_		1 _10_	_U_
Carbon Tetrachloride	1_10_	_U	1 _10_	_U			10_		10_	_U_
Bromodichloromethane	10_	_U	1_10_	_U		- —	10_	_w		_U_
1.2-Dichloropropane	10_		1 10	U	   _10_		1 _10_	_w	1 _10_	_U_
Cis-1.3-Dichloropropene	1_10_		   _10_		10_	_U		_w		_U_
Trichloroethene	10_	_U					_10_	_w		_ ئا_
Dibromochloromethane	1_10_	_U		U_		_U		_w	_	_U_
1.1.2-Trichloroethane	[_10_	_U		_U		_U		_w		_U_
Benzene	1_10_	_U					1 _10_	_w		_U_
Trans-1.3-Dichloropropene	1_10_	_U		_U		U		_w		_U_
Bromoform	1_10_		1_10_	_U		U		_UJ		_U_
4-Methyl-2-pentanone	10_	_U		_U		_U	1_10_	_UJ		_U_
2-Hexanone	1_10_					U		_w		_U_
Tetrachloroethene	1_10_			_U			1_10_	_w_		_U_
1.1.2.2-Tetrachloroethane	10_	_w		_w					_10_   _10_	_U_
Toluene	10_	_w			_10_   _41_		_10_   _10_		1_10_	
Chlorobenzene			1_45_							_U_ !!
Ethylbenzene	_10_	· _U			_44_   _10		_10_		1_10_	_U_
Styrene	_10_• .				_10_		_10_		_10_	_U_
	_10_		1_10_		_10_		_10_		1 _10_	_U_
Xylene (total)	1_10_		1_10_	_U	1_10_		_10_	_w	1_10_	_U_

Case #: 26593

SDG: ECMMO

**IEANJ** 

Site:

HIMCO DUMP. ELKHART

Lab. .

Reviewer: Date:

| ECMMO **ECMMOMS** ECMMOMSD ECMM2 [ ECMM4 Sample Number: | WT102A WT102A | WT112A WT114A Sampling Location: | WT102A Matrix: Water | Water | Water Water | Water Units: ( ug/L ( ug/L | ug/L | ug/L ug/L Date Sampled: | 10/19/98 1 10/19/98 10/19/98 10/20/98 10/20/98 %Moisture: PH: Dilution Factor: 1.0 1.0 ] 1.0 1 1.0 1 1.0 Semivolatile Compound Result Flag | Result Flag Result Flag | Result Flag Result Flag | Pheno1 \_10\_ \_U\_ \_ | \_62\_ | \_58\_ | \_10\_ \_U\_ | \_10\_ U\_\_\_ bis(2-Chloroethyl)ether 1\_10\_ \_U\_\_\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_\_\_ | \_10\_ \_U\_\_ | \_10\_ \_ | \_58\_ 2-Chlorophenol 1\_10\_ \_U\_\_\_ | \_61\_ \_U\_\_ | \_10\_ \_ | \_10\_ \_U\_\_\_ 1.3-Dichlorobenzene \_n\_\_ | \_30\_ \_ | \_30\_ | \_10\_ \_ | \_10\_ \_U\_\_ | \_10\_ 1.4-Dichlorobenzene \_U\_\_\_ 1 \_27\_ 1 \_10\_ | \_28\_ 1 10 \_ | \_10\_ \_U\_\_\_ 1.2-Dichlorobenzene 1\_10\_ \_U\_\_\_ | \_10\_ \_ | \_10\_ 1\_10\_ \_U\_ \_ | \_10\_ \_U\_ \_U\_\_ | \_10\_ 2-Methylphenol | \_10\_ \_ | \_10\_ \_ | \_10\_ \_U\_ \_U\_ 2.2'-oxybis(1-chloropropane) \_ | \_10\_ 1 10 U \_ | \_10\_ U \_ | \_10\_ U U. \_ | \_10\_ 4-Methylphenol | \_10\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_\_\_ | \_10\_ \_ | \_10\_ U\_ \_U\_\_\_ N-Nitroso-di-n-propylamine | \_10\_ \_U\_\_\_ | \_29\_ | \_28\_ | \_10\_ 1\_10\_ Hexachloroethane | \_10\_ \_U\_\_\_ | \_10\_ \_\_ | \_10\_ \_U\_\_\_ | \_10\_ \_ | \_10\_ Nitrobenzene 1 \_10\_ \_U\_\_\_ | \_10\_ \_U\_\_\_ [ \_10\_ \_U\_\_\_ | \_10\_ \_U\_ \_\_ [ \_10\_ \_U\_ Isophorone | \_10\_ \_U\_\_ | \_10\_ \_ | \_10\_ \_U\_\_ | \_10\_ \_ | \_10\_ U 2-Nitrophenol \_ | \_10\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_ \_U\_\_ | \_10\_ \_U\_ 2.4-Dimethylphenol . | \_10\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_ | \_10\_ bis(2-Chloroethoxy)methane | \_10\_ \_U\_\_\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_\_ j \_10\_ 2.4-Dichlorophenol | \_10\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_ | \_10\_ 1.2.4-Trichlorobenzene | \_10\_ \_U\_\_\_ | \_30\_ \_ | \_30\_ \_ | \_10\_ \_U\_ \_\_ | \_10\_ \_U\_ Naphthalene 10\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ U \_ | \_10\_ \_U\_ \_ | \_10\_ U \_UJ\_\_ | \_10\_ 4-Chloroaniline | \_10\_ \_W\_\_ | \_10\_ \_W\_\_ | \_10\_ \_UJ\_\_ | \_10\_ \_UJ\_\_ Hexachlorobutadiene \_W\_\_ | \_10\_ 1 \_10\_ \_W\_\_ | \_10\_ \_UJ\_\_ | \_10\_ \_\_ | \_10\_ \_W\_\_ ( 4-Chloro-3-methylphenol | \_10\_ 1\_10\_ \_U\_\_\_ | \_57\_ \_ | \_53\_ \_ | \_10\_ 2-Methylnaphthalene \_ | \_10\_ | \_10\_ \_U\_\_\_ | \_10\_ \_U\_\_ | \_10\_ \_\_ | \_10\_ Hexachlorocyclopentadiene 1 \_10\_ \_U\_\_\_ | \_10\_ \_U\_ \_\_ | \_10\_ \_U\_\_ | \_10\_ \_\_ | \_10\_ 2.4.6-Trichlorophenol 1 \_10\_ \_U\_\_\_ | \_10\_ \_ | \_10\_ \_U\_\_\_ | \_10\_ \_10\_ 2.4.5-Trichlorophenol | \_25\_ \_U\_\_\_ | \_25\_ \_ | \_25\_ \_U\_\_ | \_26\_ \_U\_\_\_ | \_26\_ 2-Chloronaphthalene 1\_10\_ \_U\_\_\_ [ \_10\_ \_U\_\_\_ | \_10\_ \_U\_\_\_ | \_10\_ \_U\_\_ | \_10\_ 2-Nitroaniline | \_25\_ \_U\_\_\_ | \_25\_ \_U\_\_\_ | \_25\_ \_U\_\_ | \_26\_ \_U\_\_ | \_26\_ Dimethylphthalate 1\_10\_ \_U\_\_\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_\_\_ | \_10\_ \_U\_\_ | \_10\_ Acenaphthylene 1 \_10\_ \_U\_\_ | \_10\_ \_U\_\_\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_\_\_ | \_10\_ \_U\_ \_0\_ | \_10\_ \_ | \_10\_ \_ | \_10\_ 2.6-Dinitrotoluene 1 \_10\_- . \_U\_\_ | \_10\_ \_U\_\_ U . | \_25\_ 3-Nitroaniline | \_25\_ \_ | \_25\_ \_U\_ \_ 1 \_26\_ | \_26\_ \_\_U\_\_\_

Case #: 26593

SDG: ECMMO

Site:

HIMCO DUMP. ELKHART

Lab. : Reviewer: IEANJ

Date:

Sample Number:	ECMQ2		ECMQ3		ECM04		l		Ī	
Sampling Location:	WT115A		WT115A		WT116A					
Matrix:	Water		Water		Water					
Units:	ug/L		ug/L		ug/L				1	
Date Sampled:	10/21/98		10/21/98		10/21/98					
%Moisture:	i						·			
PH:	i		i				i			
Dilution Factor:	1.0		1 1.0		1.0		·			
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Chloromethane	1_10_		1_10_		10_	- <u> </u>				
Bromomethane	10_	_UJ	_10_	_W		_w	·		1	
Vinyl Chloride	_10_	_U	_10_	_U	_10_	_U				
Chloroethane	_10_	U	1_10_		_10_	_U				
Methylene Chloride	1_10_		1_10_	U	10_		1			
Acetone	_10_	_U	1_10_	U	10_	_U	I		1	
Carbon Disulfide	[ _10_		[ _10_	_U	_10_	_U	l		l	
1.1-Dichloroethene	_10_		_10_			_U				
1.1-Dichloroethane	1_10_		1_10_	U		_J				
Total 1.2-Dichloroethene	[ _10_		1 _10_			_U	1		1	
Chlorofo <b>r</b> m	! _10_	_	1_10_	U		U	1			
1.2-Dichloroethane	1 _10_	U		_U	_10_	U				
2-Butanone	10_	_W		_w		_w				
1.1.1-Trichloroethane	1 _10_		1_10_	_U		_U	,			-
Carbon Tetrachloride	10_		10_		_10_		r.		1	
Bromodichloromethane	10_		1_10_	_U	10_		, }		<u> </u>	
1.2-Dichloropropane	1 _10_		1_10_		10_		<del></del>			
Cis-1.3-Dichloropropene	1_10_		1_10_		10_		<u> </u>			
Trichloroethene	10_		1_10_		10_		1			
Dibromochloromethane	10_		1_10_		1 _10_	U	· ———			
1.1.2-Trichloroethane	1 _10_		_10_		_	_0	· ———		,	
Benzene	1 _10_		1_10_			_U	i ————			
Trans-1.3-Dichloropropene	1 _10_		1 _10_ 1 _10_			_U	1		1	
Bromoform	1 _10_	U *							<b>-</b>	
4-Methyl-2-pentanone	1 _10_			_U		_U	· ———			
2-Hexanone	1 _10_		_10_   _10_	_U		_U	<u> </u>			
Z-nexamone Tetrachloroethene	1 _10_	_U		_U		- <sup>U</sup>	! ———			
1.1.2.2-Tetrachloroethane		_U	_10_	_U	10_	_U	!		!	
Toluene	1_10_		\ _10_ \ _10_	_m_		_m_	· ———	<del></del>	!	
	_10_s .	<del>U</del>	1_10_	U	_10_	_U	!		!	
Chlorobenzene	_10_		1 _10_		1_10_	_U	!		!	
Ethylbenzene	_10_		_10_		_10_	_U	!		!	
Styrene	_10_	_U	1_10_		_10_	_U	1		l	
Xylene (total)	[ _10_	_Ü	_10_	_U	1_10_	_U	1		1	

Sample Number:	ECMMO		ECMMOMS		ECMMOMSD		ECMM2		ECMM4	
Sampling Location:	WT102A		WT102A		WT102A		WT112A		WT114A	1
Matrix:	Water		! Water	•	Water		Water		water	-
Units:	ug/L		ug/L		ug/L		ug/L		l ug/L	1
Date Sampled:	10/19/98		10/19/98		10/19/98		10/20/98		10/20/98	1
%Moisture:	i		ł		1					1
PH:	İ		1				1			
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	1
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	l Result	Flag
Acenaphthene	1 _10_	_U	33_		,   _31_		1 _10_	_ U	10_	U
2.4-Dinitrophenol	_25_	_U	_25_	_U	_25_	_U	_26_	_U	_26_	_U
4-Nitrophenol	_25_	_U	_51_		51_		_26_	_U	_26_	_U 1
Dibenzofuran	_10_	_U	_10_	_U	10_	_U	1_10_	_U	_10_	_U }
2,4-Dinitrotoluene	1_10_	_U	1 _34_		_34_		_10_	_U	_10_	_U [
Diethylphthalate	_10_	_U	_10_	_U	10_	_U	_10_	_U		_J I
4-Chlorophenyl-phenylether	_10_	_U	1_10_	_U	1 _10_	_U	_10_	_U	10_	_U!
Fluorene	1_10_	_U	1_10_	_U		_U	10_	_U	10_	_U
4-Nitroaniline	_25_		_25_	_U			26_		_26_	_U
4.6-Dinitro-2-methylphenol	_25_	_U	25_	_U		_U	26_	_U	_26_	_U
N-Nitrosodiphenylamine	_10_	_U	1_10_	_U	_10_	_U		_U	1_10_	_U 1
4-Bromophenyl-phenylether	_10_	_U	1 _10_		_10_		_10_		1 _10_	_U
Hexachlorobenzene	_10_	_U	1_10_	_U	1 _10_	U		_U	10_	_U
Pentachlorophenol	_25_	_U	_60_		1 _54_		26_		_26_	_U
Phenanthrene	_10_		1_10_		_10_	_U	10_		1_10_	_U [
Anthracene	1_10_	_U	1_10_	U	10_	_U	_10_	_U	_10_	_U {
Carbazole	1_10_	_U	_10_	_U	_10_	_U	_10_	_U	_10_	_ับ
Di-n-butylphthalate	_10_	_U	1_10_	_U	1 _10_	_U	1_10_	_W_	! _10_	_U
Fluoranthene	_10_	_U	1 _10_	_U	1 _10_	_U	1_10_	_U	_10_	_U 1
Pyrene	_10_	_U	<u>  _40_</u>		_37_		_10_	_U	10_	_U {
Butylbenzylphthalate	_10_	_U	_10_	_U	_10_	_U	10_	_U	10_	_U {
3.3°-Dichlorobenzidine	_10_	_U	1_10_	_U	10_	_U	10_	_U	[ _10_	_U
Benzo(a)anthracene	1 _10_	_U	_10_		1_10_	_U	[ _10_	_U	1 _10_	_U
Chrysene	_10_		1 _10_		1_10_		1 _10_	_U	1_10_	_U
bis(2-Ethylhexyl)phthalate	1_3_	_J	10_	_U	_10_	_U	1_10_		10_	_U I
Di-n-octylphthalate	1_10_	_U	_10_	_U	10_	U	_10_	_U	10_	_U !
Benzo(b)fluoranthene	_10_	_U	1 _10_	_U	1_10_	_U	_10_	_U	1_10_	_U 1
Benzo(k)fluoranthene	_10_	_U	1_10_		[ _10_		1_10_	_U	10_	_U }
Benzo(a)pyrene	1_10_	_U	_10_	_U	[ _10_		1 _10_		4 _10_	_U
Indeno(1.2.3-cd)pyrene	_10_	_U	1_10_	_U	_10_	_u	1_10_		_10_	_U
Dibenz(a.h)anthracene	_10_	_U	1_10_				10_	_U		_U (
Benzo(g,h,i)perylene	1_10_		1_10_		1_10_		1_10_	_U	10_	_U



Page \_\_ SDG: ECMMO Case #: 26593 Site: HIMCO DUMP, ELKHART **IEANJ** Lab. : Reviewer: 1 . 6€ 0110 Date: | ECMQ2RE | ECMM5 | ECMM5RE | ECMQ0 | ECMQ2 Sample Number: Sampling Location: | WT101A | WT101A WT101A | WT115A | WT115A | Water | Water Water | Water Matrix: | Water | ug/L | ug/L l ug/L Units: | ug/L | ug/L 10/21/98 1 10/21/98 10/21/98 1 10/21/98 1 10/21/98 Date Sampled: %Moisture: ₽Н∙ 1 1.0 1 1.0 1.0 1.1.0 1.1.0Dilution Factor: Result Result Semivolatile Compound Flag Flag Result Flag | Result Flag | Result Flag \_W\_\_ | Pheno1 | \_10\_ \_U\_\_\_ | \_10\_ \_UJ\_\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ bis(2-Chloroethyl)ether | \_10\_ \_U\_\_\_ | \_10\_ \_UJ\_\_ | \_U\_\_ | \_10\_ \_UJ\_\_ | \_10\_ \_U\_\_\_ | \_10\_ 2-Chlorophenol 10\_ \_U\_\_ | \_10\_ \_W\_\_ | <u>-</u>10\_ \_U\_\_\_ | \_10\_ \_U\_\_\_ | \_10\_ \_UJ\_\_ | 1.3-Dichlorobenzene 10 \_U\_\_\_ | \_10\_ \_W\_\_ | \_10\_ \_U\_\_\_ | \_10\_ U \_ | \_10\_ W 1 \_10\_ \_U\_\_\_ | \_10\_ 1.4-Dichlorobenzene \_U\_\_\_ | \_10\_ \_W\_\_ | \_10\_ \_U\_\_ | \_10\_ \_W\_\_ I 1.2-Dichlorobenzene 1 \_10\_ \_U\_\_ | \_10\_ \_W\_\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_W\_\_ | 2-Methylphenol 10\_ \_U\_\_ | \_10\_ \_UJ\_\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_W\_\_ { 2.2'-oxybis(1-chloropropane) 10\_ \_U\_\_ | \_10\_ \_W\_\_ | \_10\_ \_ป\_\_ | \_10\_ \_U\_\_\_ | \_10\_ \_W\_\_ | 4-Methylphenol | \_10\_ \_U\_\_\_ | \_10\_ \_W\_\_ | \_10\_ \_U\_\_\_ | \_10\_ \_U\_\_ | \_10\_ \_UJ\_\_ | N-Nitroso-di-n-propylamine 1\_10\_ \_U\_\_ | \_10\_ \_W\_\_ | \_10\_ \_W\_\_ | \_U\_\_\_ | \_10\_ \_U\_\_ | \_10\_ Hexach loroethane | \_10\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_W\_\_ | \_W\_\_ | \_10\_ \_U\_\_\_ | \_10\_ Nitrobenzene | <u>-</u>10\_ \_U\_\_ | \_10\_ \_W\_\_ | \_W\_\_ | \_10\_ \_U\_\_\_ | \_10\_ \_U\_\_\_ | \_10\_ Isophorone 10\_ \_U\_\_ | \_10\_ \_UJ\_\_ | \_UJ\_\_ | \_10\_ \_U\_\_\_ | \_10\_ \_U\_\_ | \_10\_ 2-Nitrophenol 10\_ \_W\_\_ | \_10\_ \_UJ\_\_ | \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_\_\_ | \_10\_ \_UJ\_\_ | \_10\_ 2.4-Dimethylphenol 10 \_U\_\_ | \_10\_ \_01\_\_ | \_-10\_\_ \_U\_\_\_ | \_10\_ \_W\_\_ | bis(2-Chloroethoxy)methane | 10 \_U\_\_ | \_10\_ \_W\_\_ | \_10\_ \_U\_\_ | `\_10\_ \_U\_\_\_ | \_10\_ \_W\_\_ | 2.4-Dichlorophenol \_UJ\_\_ | \_10\_ \_U\_\_ | \_10\_ \_UJ\_\_ | | \_10\_ \_U\_\_ | \_10\_ \_U\_\_\_ | \_10\_ 1.2.4-Trichlorobenzene | \_10\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_W\_\_ | \_W\_\_ | \_10\_ \_U\_\_ | \_10\_ Naphthalene | \_10\_ \_W\_\_ | \_10\_ \_W\_\_ | \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_W\_\_ | \_10\_ \_W\_\_ | \_10\_ \_W\_\_ | \_10\_ 4-Chloroaniline | \_10\_ \_W\_\_ | \_10\_ \_W\_\_ I | \_10\_ \_W\_\_ | \_10\_ Hexachlorobutadiene \_U\_\_ | \_10\_ \_W\_\_ | \_10\_ \_U\_\_ | \_10<u>\_</u> \_W\_\_ | 4-Chloro-3-methylphenol 10\_ \_U\_\_ | \_10\_ \_W\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_\_ | \_10\_ \_W\_\_ j 2-Methylnaphthalene \_W\_\_ I 10\_ \_U\_\_ | \_10\_ \_W\_ | \_10\_ \_U\_\_ | \_10\_ \_U\_\_\_\_\_1 \_10\_ Hexachlorocyclopentadiene | \_10\_ \_W\_\_ I \_R\_\_' | \_10\_ \_UJ\_\_ [ \_10\_ \_U\_\_\_ | \_10\_ \_W\_\_ | \_10\_ 2.4.6-Trichlorophenol | \_10\_ \_R\_\_ | \_10\_ \_W\_\_ | \_10\_ \_U\_\_\_ | \_10\_ \_W\_\_ | \_10\_ \_ယ\_\_ ၂ \_R\_\_ | \_25\_ \_W\_\_ | \_25\_ 2.4.5-Trichlorophenol \_U\_\_ | \_26\_ | \_25\_ \_W\_\_ | \_26\_ \_W\_\_ | 2-Chloronaphthalene \_R\_\_\_ | \_10\_ 1\_10\_ \_W\_\_ | \_10\_ \_W\_\_ | \_10\_ \_W\_\_ ( \_U\_\_\_ | \_10\_ 2-Nitroaniline | \_25\_ \_R\_\_\_ | \_25\_ \_W\_\_ i \_W\_\_ | \_26\_ \_U\_\_ | \_26\_ \_W\_\_ | \_25\_ Dimethylphthalate 1\_7\_ • \_J\_\_ | \_10\_ \_W\_\_ | \_W\_\_ | \_10\_ \_U\_\_ | \_10\_ \_W\_ | \_10\_

Acenaphthylene

3-Nitroaniline

2.6-Dinitrotoluene

| \_10\_

1\_10\_

| \_25\_

R\_\_\_ | \_10\_

\_R\_\_\_ | \_25\_

| \_10\_

\_W\_\_ | \_10\_

\_W\_\_ | \_10\_

\_W\_\_ | \_26\_

\_U\_\_\_ | \_10\_

\_U\_\_ | \_10\_

\_U\_\_\_ | \_26\_

\_W\_\_ | \_10\_

\_W\_\_ | \_10\_

\_W\_\_ | \_25\_

\_W\_\_ |

\_W\_\_ 1

\_W\_\_ 1

Page	٥f	

Sample Number:	ECMM5		ECMM5RE		ECMQ0		ECMQ2		ECMQ2RE	
Sampling Location:	WT101A		WT101A		WT101A		WT115A		; WT115A	ł
Matrix:	Water		Water		Water		Water		Water	i
Units:	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled:	10/21/98		10/21/98		10/21/98		10/21/98		10/21/98	į
%Moisture:	Ī		1		[		į		i	
PH:	1		1				1		1	-
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	1
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	1_10_	_R	1 _10_	<u>-ω_</u>		_U	10_	. <u>_</u> w		_W
2.4-Dinitrophenol	_25_	_R	_25_	_w <u></u>	_26_		_26_	_w	_25_	_UJ
4-Nitrophenol	_25_	_R	25_	_W	_26_	_U	_26_	_W	_25_	_w
Dibenzofuran	_10_	_R	10_	_w	_10_	_U	_10_	_W	_10_	_w
2.4-Dinitrotoluene	10_	_R	_10_	_w	_10_	_U	_10_	_w	_10_	_W
Diethylphthalate	_19_	_J	1_7_	_J	1_9_	_J	1_10_	_ധ	1_10_	_UJ
4-Chlorophenyl-phenylether	_10_		10_		_10_	_U	1_10_	_w	10_	_w
Fluorene	1 10_	R	1_10_	_w			10_	_w	_10_	_W
4-Nitroaniline	25_	_t,	_25_	_w			26_		_25_	_W
4.6-Dinitro-2-methylphenol	25_	_U	_25_	_w		_U	26_	_U	_25_	_UJ
N-Nitrosodiphenylamine	_10_	_U	10_	_ເນ	_10_	_U	_10_	_U	10_	_UJ
4-Bromophenyl-phenylether	_10_		_10_	_w		_U			_10_	_w
Hexachlorobenzene	10_	_U	_10_	_w	_10_	_U	10_	_U	1_10_	_w
Pentachlorophenol	_25_			_ເນ		_U	_26_	_U		_W
Phenanthrene	1_10_		1_10_	_w			10_		1_10_	_w
Anthracene	10_	_U		_w			1 _10_		1 _10_	_m
Carbazole	1_10_	_ U		_UJ			10_	U	1 _10_	_w
Di-n-butylphthalate	10_	_W					1_10_		10_	_w
Fluoranthene	10_		10	_w	! 10	_U	10_	_U	_10_ =	
Pyrene	1 10_	_UJ		_w			10_		10_	_m
Butylbenzylphthalate	1 10		1 10	_w			1_10_		_10_	_w
3.3'-Dichlorobenzidine	1 _10_		10_	_w		_U	10_		10_	_w
Benzo(a)anthracene	10_	_W	1 _10_	_w		U	10_		1 _10_	_U.J
Chrysene	10_	_w	10_	_w	10_	_U	_10_	_UJ	_10_	_UJ
bis(2-Ethylhexyl)phthalate	_10_	_w	10	_w	1 10	U	1 _10_	_W	_10_	_UJ
Di-n-octylphthalate	1 10_		1 _10_	_w			1 _10_		10_	_w
Benzo(b)fluoranthene	1 10_		10_		1 _10_		1_10_		10	_w
Benzo(k)fluoranthene	1 _10_	R	. – –		1 _10_		10_		1 _10_	_w
Benzo(a)pyrene	10				10_			_R	1 _10_	_w
Indeno(1.2.3-cd)pyrene	1 _10_	- —	1 _10_	_w_			10_		1 _10	_w
Dibenz(a,h)anthracene	1 _10_	- —	1 _10_				1_10_	- —	1 _10_	_w
Benzo(g.h.i)perylene	1 _10_		1 _10_		_10_	_U	1_10_	_R	1 _10_	_w

Case #: 26593

SDG: ECMMO

Lab. : Reviewer:

Site:

HIMCO DUMP. ELKHART

IEANJ

WILLIA WILLPROUP WILLPRINSOLE

Reviewer:			6.0	<i>i</i> 7		13.4				
Date:										
Sample Number:	1 ECMQ3		1 ECMQ4		ECMQ9		ECMR1		<del></del>	
Sampling Location:	WT115A		WT116A		WT119A		WT119A			
Matrix:	Water		Water		Water		Water		!	
Units:	ug/L		ug/L	•	l ug/L		ug/L		1	
Date Sampled:	10/21/98		10/21/98		1 10/22/98		10/22/98			
%Moisture:	1						1			
PH:	Ì		1		, 		1		·	
Dilution Factor:	1.0		1.0		1.0		1.0			
Semivolatile Compound	Result	Flag	   Result	- <del></del> Flag	Result	- <del></del> Flag	Result	- Flag	Result	- Flag
			1				l		l	
Pheno?	1_10_	_U	1 _10_	_U	1_10_		j _10_	_U	l	
bis(2-Chloroethyl)ether	1_10_	_U	1 _10_	U			1_10_	_U	l	
2-Chlorophenol	_10_		1 _10_	_U	_10_	U	_10_	_ <sup>U</sup>		
1.3-Dichlorobenzene	_10_	_U	_10_	U	1_10_	_U	1 _10_	_U	l	
1.4-Dichlorobenzene	_10_	_U	[ _10_	_U	1_10_	_U	_10_	_U		
1.2-Dichlorobenzene	1_10_		_10_		_10_	_U	_10_	_U	l	
2-Methylphenol	_10_		_10_	_U	_10_	_U		_U	l	
2.2'-oxybis(1-chloropropane)	[ _10_	_U	_10_	_U	_10_	_U	1_10_	_U		
4-Methylphenol	_10_	_U	_10_	_U	_10_	_U	1_10_	_U		
N-Nitroso-di-n-propylamine	_10_	_U	1_10_	_U	1_10_	_U	10_	_U		
Hexachloroethane	_10_	_U	_10_	_U	10_	_U	_10_	_U	<u> </u>	
Nitrobenzene	1_10_	_U	_10_	_U	_10_	_U	_10_	_U	l	
Isophorone	_10_	_U	10_	_U	10_	U	1_10_	_U		
2-Nitrophenol	_10_	_U	10_	_U	1_10_	_U	_10_	_U		
2.4-Dimethylphenol	_10_	_U	1_10_	_U	10_	_U	[ _10_	_U	l	
bis(2-Chloroethoxy)methane	_10_	_U	1 _10_	_U	1 _10_	_U	10_	_U		
2.4-Dichlorophenol	_10_	_U	10_	_U	] _10_	_U	1_10_	_U	l	
1.2.4-Trichlorobenzene	10_	_U	_10_	_U	_10_	_U	_10_	_U	1	
Naphthalene	_10_	_U	[ _10_	_U	_10_	_U	[ _10_	U	1	
4-Chloroaniline	_10_	_W	_10_	_W	1_10_	_U	_10_	_U		
Hexachlorobutadiene	_10_	_U	_10_	_U		U	10	_U	1	
4-Chloro-3-methylphenol	_10_	_U	10_	_U		_U	1_10_			
2-Methylnaphthalene	_10_	_U		_U	1 _10_	_U	. –			
Hexachlorocyclopentadiene	_10_	_U	_10_	_U	1_10_	U	1_10_		·	
2.4.6-Trichlorophenol	1_10_	_U	_10_	υ <u></u>	1_10_		1 _10_	_U	<u> </u>	
2.4.5-Trichlorophenol	25_	_U	_26_					_U	· ——	
2-Chloronaphthalene	10_	U			_10_		1 _10_	U		
2-Nitroaniline	_25_		26_		1 _26_		26_	_v		
Dimethylphthalate	1_10_		1_10_		10_		1_10_		; —	
Acenaphthylene									· ——	
· · · · ·									1	
* *	10_ 1_10_ 1_25_	_U	_10_   _10_   _10_   _26_	_U _U	_10_   _10_   _10_   _26_	_U	_10_   _10_   _10_   _26_	_U _U _U		- - -

8 9

Page \_\_ of \_\_ .~

Sample Number:	ECMQ3		ECMQ4		ECMQ9		ECMR1			
Sampling Location:	WT115A		WT116A		WT119A		WT119A		l	
Matrix:	! Water		Water		Water		Water		ł	
Units:	ug/L		ug/L		ug/L		ug/L		·	
Date Sampled:	10/21/98		10/21/98		10/22/98		10/22/98			
%Moisture:	1		1		1		i		l	
PH:			1		١.		ĺ		l	
Dilution Factor:	1.0		1.0		1.0		1.0			
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	1_10_	_U	1_10_		[ _10_		1_10_	- <u>U</u>	·	
2.4-Dinitrophenol	25_		_26_	U			1 _26_	_u	1	
4-Nitrophenol	25_		26_	_U	_		26_	U	1	
Dibenzofuran	10_		1 _10	U			10_			
2.4-Dinitrotoluene	1_10_		10		10		10_	_U		
Diethylphthalate	10_		1 _10_		1 _10_		10	_U		
4-Chlorophenyl-phenylether	1 _10_	_U					10_			
Fluorene	10_		10_	_U			1 _10_			
4-Nitroaniline	25		_26_	_U				_U		
4.6-Dinitro-2-methylphenol	25_	_U		U						
N-Nitrosodiphenylamine	10_		1_10		10_		10_		·	
4-Bromophenyl-phenylether	10_		10	U			10_	_U		
Hexachlorobenzene	10_	- U			_		1 _10_	_U		
Pentachlorophenol	25_		26_			_U	1 _26_			
Phenanthrene	1 _10_	U		_U			1 _10_	U	-	
Anthracene	10_		1 _10	_ U			10_			
Carbazole	10		10		1 _10_		1 _10_			
Di-n-butylphthalate	10_	_UJ		_w			1 _10_			
Fluoranthene	1 10		10		10_		1 _10_	_U	. ——	
Pyrene	1_10_		1 _10_	_U			1 _10_			
Butylbenzylphthalate	1 _10_	U					10_			_
3.3'-Dichlorobenzidine	1_10_		1 _10_		1 _10_		1_10_		1	
Benzo(a)anthracene	1 _10_		10		10	U	10_			
Chrysene	10_	_U	- <b>-</b>				10_	_U		
bis(2-Ethylhexyl)phthalate	1_10_	_U	1_2_		1_10_		1_3_		<u>; ——</u>	
Di-n-octylphthalate	10_				1 _10_	U	1 _10_		ĭ	
Benzo(b) fluoranthene	10_	U			1_10_		1 _10_			
Benzo(k)fluoranthene	10_		10_		1 _10_	_U	1 _10_	U_	1	
Benzo(a)pyrene	1_10_		1 _10_		1_10_	U	1 _10_		1	
Indeno(1.2.3-cd)pyrene	10_		1_10_		1 _10_		1 _10_			
Dibenz(a.h)anthracene	10_	U			1_10_	_U	1 _10_		;	
Benzo(g,h,i)perylene	1_10_	_U			1_10_	_U	1 _10_			
benzoty, m. rypery tene	1 _20_		1 -10-		1 _10_		1 _10_	+°—	!	



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

# ESD Central Regional Laboratory Data Tracking Form for Contract Samples

Data Set No:	CERCLIS No: /N	
Case No: 26593	Site Name Location:	Hima Dump
Contractor or EPA Lab: ZEA	Data User:	USA CE
No. of Samples: Date	Sampled or Data Rece	eived: /1-16-98
Have Chain-of-Custody records Have traffic reports or packing If no, are traffic report or packing of-custody record? Yes N If no, which traffic report or	lists been received acking list numbers o	? Yes No No written on the chai
Are basic data forms in? Yes No of samples claimed:No		
Received by: Light /3	Durseld Date:	11-16-98
Received by LSSS: Lightle	Burnett Date:	12-16-88
Review started: 8/4/95	Reviewer Signature:	Mily St
Total time spent on review:	15 Date revie	ew completed: 12/1/
Copied by: Lightle Bu	nest Date	: 12-16-98
Mailed to user by:	Burnest Date	:12-16-98
DATA USER: Please fill in the blanks belo Sylvia Griffen, Data mgmt		
Data received by:	Date	: <u></u>
Data review received by:	Date	:
Organic Data Complete [ ] S Dioxin Data Complete [ ] S	Suitable for Intende Suitable for Intende Suitable for Intende	ed Purpose [ ] / if
Received by Data Mgmt. Coordin		

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	
SUBJECT:	Review of Data  Received for Review on November 10, 1998
FROM:	Stephen L. Ostrodka, Chief (SRT-4J) for Iture Ostrodka Superfund Technical Support Section Moderned & Bornel 12/4/98
TO:	Data User: USACE
We have reviewed the data	for the following case:
Site name: Himco Dump	(IN)
Case number: 26593	SDG Number: <u>ECMM8</u>
Number and Type of Samp	oles: 9 soil samples
Sample Numbers: <u>ECMM</u>	8-ECMM9, ECMN5, ECMN8-ECMN9, ECMP0-ECMP2
Laboratory: IEA	Hrs. for Review: Way 16.5
Following are our findings	ptable and unable with the greatifications.  The morative.
described in the aft	ached novative.
policed &	Byrich

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

Site Name: Himco Dump (IN)

SDG Number: ECMM8

Laboratory: IEA

#### Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Nine soil samples (ECMM8-ECMM9, ECMN5, ECMN8-ECMN9, ECMP0-ECMP2) were collected on 10/20/9. The lab received the samples on 10/21/98 in good condition. All samples were analyzed for the list of VOA and SVOA analytes. All samples were analyzed according to CLP SOW OLMO3.2 3/90.

Prepared By: Steffanie Tobin (Lockheed/ESAT)

Date: December 1, 1998

Site Name: Himco Dump (IN)

SDG Number: ECMM8

Laboratory: IEA

#### 1. HOLDING TIME

No problems were found for this qualification.

#### 2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

No problems were found for this qualification.

#### 3. CALIBRATION

The following volatile samples are associated with a continuing calibration whose corresponding initial calibration has percent relative standard deviation (%RSD) outside primary criteria. Hits are qualified "J" and non-detects are agged "UJ".

Bromomethane, 2-Butanone VBLKE7, VHBLKE2

Chloroethane

ECMM8, ECMM9, ECMN5, ECMN6, ECMN8, ECMN9 ECMP0, ECMP0MSD, ECMP1, ECMP2, VBLKE3 VBLKE4

The following volatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Chloromethane, Tetrachloroethene

ECMM8, ECMM9, ECMN5, ECMN6, ECMN8, ECMN9, ECMP0, ECMP0MSD, ECMP1, ECMP2, VBLKE3, VBLKE4

Bromoform

ECMM8, ECMM9, ECMN5, ECMN6, ECMN8, ECMP0, ECMP0MSD, ECMP1, ECMP2, VBLKE3

1,1,2,2-Tetrachloroethane VBLKE7, VHBLKE2

The following semivolatile samples are associated with a continuing calibration percent difference (%D) outsignmary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

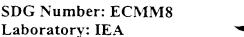
4-Chloroaniline, Hexachlorobutadiene ECMN5DL, ECMN6DL, ECMP1, ECMP2

Prepared By: Steffanie Tobin (Lockheed/ESAT)

Date: December 1, 1998

Site Name: Himco Dump (IN)

SDG Number: ECMM8



#### 4. METHOD BLANKS

No problems were found for this qualification.

#### 5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The following semivolatile samples have one surrogate recovery which below the criteria window. Hits and non-detects are not flagged since the protocol allow at least one surrogate to be out of control before a reanalysis or qualification is required.

ECMP0MS

#### 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No problems were found for this qualification.

#### 7. FIELD BLANK AND FIELD DUPLICATE

None of the samples in this data set are field blanks or field duplicates.

#### 8. INTERNAL STANDARDS

No problems were found for this qualification.

#### 9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms, it appears that all VOA, SVOA, and Pesticide/PCB compounds were properly identified.

#### 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following semivolatile samples have analyte concentrations below the quantitation limit (CRQL). All resu below the CRQL are qualified "J".

ECMN5

Pyrene

ECMN6

Naphthalene, Fluoranthene, Pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene

ECMN8

bis(2-Ethylhexyl)phthalate

Prepared By: Steffanie Tobin (Lockheed/ESAT) Date: December 1, 1998

Site Name: Himco Dump (IN)

SDG Number: ECMM8

Laboratory: IEA

ECMN9

Fluoranthene, Pyrene, Benzo(b)fluoranthene

ECMP1

bis(2-Ethylhexyl)phthalate

#### 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

#### 12. ADDITIONAL INFORMATION

Below is the summary of the pH for the samples of this dataset:

Sample ID	pН
ECMM8	6.6
ECMM9	7.5
ECMN5	6.8
ECMN6	6.8
ECMN8	9.6
ECMN9	7.7
ECMP0	6.3
ECMP1	6.5
ECMP2	6.9

No flags were reported for the SVOA TIC results. Please, refer to Form I SVOA for the final flags of the SVOA TIC results.

## CADRE Data Qualifier Sheet

<u>Qualifiers</u>	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The anlayte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the present of an analyte for which there is presumptive evidence make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present)
Н	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

# ESD Central Regional Laboratory Data Tracking Form for Contract Samples

Data Set No:	CERCLIS No: /N/854J	
Case No: 265-93	Site Name Location: Him	co Dump
Contractor or EPA Lab: IEA	Data User: LUSA C	E
No. of Samples: 9 Date	e Sampled or Data Received: 1	-10-98
Have Chain-of-Custody records Have traffic reports or packing If no, are traffic report or p of-custody record? Yes	g lists been received? Yes acking list numbers written No	No on the chain-
Are basic data forms in? Yes No of samples claimed: No	No No of samples received: 9	
Received by: Synatte 1	Burnex Date: 1/-10	7-98
Received by LSSS: Synette	Burnell Date: 11-10-	98
Review started: 11 23 - 98	Reviewer Signature: Stepan	ie Tobin
Total time spent on review:	7hrs Date review comple	eted: 12-01-
Copied by: Synette Bu		
Mailed to user by:	Burned Date: 10	2-15-98
<pre>DATA USER: Please fill in the blanks bel</pre>	ow and return this form to: t. Coordinator, Region V, 59	SCRL
Data received by:	Date:	
Data review received by:	Date:	
Inorganic Data Complete [ ] Organic Data Complete [ ] Dioxin Data Complete [ ] SAS Data Complete [ ]	Suitable for Intended Purpos Suitable for Intended Purpos	se [ ] / if C se [ ] / if C
PROBLEMS: Please indicate re uses.	asons why data are not suit	table for you
Received by Data Mgmt. Coording	nator for Files. Data:	

#### Semivolatile Analysis Data - SBLKH4 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMM8

¦AS ►-⊶UMBER	COMPOUND NAME	RŦ	ESTIMATED CONCENTRATION	Q
	3-PENTEN-2-ONE, 4-METHYL-	3.93	96,000	
	UNKNOWN	4.30	120.000	
	UNKNOWN	4.41	320.000	
į	ALDOL CONDENSATION PRODUCT	4.81	81000.000	
	UNKNOWN ALCOHOL	5.22	88.000	
	UNKNOWN	5.57	2000.000	
ì	UNKNOWN	6.30	360.000	
	UNKNOWN	6.45	150.000	
	UNKNOWN ALCOHOL	8.36	76.000	
j	UNKNOWN ACID	10.35	80.000	
	UNKNOWN ACID	12.47	100.000	
FILE NAME	: ECMM8.SDG DATE: 11/10/98 TIME: 15:34 CADRE98		PAGE	: 1

CASE NO: SDG NO:	Tentatively Identified Composition 26593 ECMM8	bunds LABORATORY: IEA-NJ		
CAS WUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.31	140,000	
	UNKNOWN	4.38	300.000	
	ALDOL CONDENSATION PRODUCT	4.81	84000.000	
	UNKNOWN	5.56	1900.000	
	UNKNOWN	6.30	360.000	
	UNKNOWN	6.46	130.000	
	UNKNOWN ALCOHOL	8.36	73.000	
	UNKNOWN ACID	10.16	79.000	
	UNKNOWN ACID	10.35	150.000	
	UNKNOWN ACID	12.47	140.000	
	UNKNOWN	17.42	110.000	
	UNKNOWN	18.34	200.000	
	UNKNOWN	19.93	79.000	
	UNKNOWN	20.33	92.000	
	UNKNOWN	22.18	2200.000	
	UNKNOWN	29.10	110.000	
	UNKNOWN	31.44	140.000	

#### Semivolatile Analysis Data - ECMM9 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMM8

LABORATORY: IEA-NJ

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.29	120.000	
	UNKNOWN	4.39	360.000	
	ALDOL CONDENSATION PRODUCT	4.79	9000.000	
	UNKNOWN ALCOHOL	5.21	130.000	
	UNKNOWN	5.56	2200.000	
	UNKNOWN	6.30	410.000	
	UNKNOWN	6.46	150.000	
	UNKNOWN ALCOHOL	8.36	90.000	
	UNKNOWN ACID	10.16	100.000	
	UNKNOWN ACID	10.35	180.000	
	UNKNOWN	11.05	88.000	
	UNKNOWN ACID	12.47	170.000	
	UNKNOWN	15.46	150.000	
	UNKNOWN ACID	15.71	150.000	
	UNKNOWN	15.82	260.000	
	UNKNOHN	15.86	90.000	
	UNKNOWN	16.16	140.000	
	UNKNOWN	16.58	80.000	
	UNKNOWN	17.23	200.000	
	UNKNOWN	17.69	180.000	
	UNKNOWN	18.03	75.000	
	UNKNOWN	18.30	200.000	
	UNKNOWN PAH	18.58	160.000	
	UNKNOWN ACID	18.76	190.000	
	UNKNOWN CARBOXYLIC ACID	18.95	410.000	
	UNKNOWN	19.63	86.000	
	UNKNOWN CARBOXYLIC ACID	19.70	340.000	
	UNKNOWN	20.67	170.000	
•	UNKNOWN	21.48	480.000	
	UNKNOWN	22.12	350.000	

CASE NO: 265 SDG NO: ECM		TORY: IEA-NJ	*	
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED	Q
UN	IKNOWN	4.36	470.000	
AL	DOL CONDENSATION PRODUCT	4.79		
UN	KNOWN ALCOHOL	5.21	140.000	
UN	KNOWN	-5.56	2000.000	
UN	IKNOHN	6.29	370.000	
UN	IKNOWN	6.44	130.000	
UN	NKNOWN ACID	10.16	82.000	
UN	NKNOWN ACID	10.35	150.000	
UN	NKNOWN ACID ,	12.47	150.000	
PH	HOSPHORIC ACID, TRIS(3-METHYLPHENY	21.24	97.000	
ILE NAME: EC	CMM8.SDG DATE: 11/10/98 TIME: 15:34 CADRE98		PAGE:	

#### Semivolatile Analysis Data - ECMN6 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMM8

CAS ,UMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION (
	UNKNOWN	4.32	320.000
	ALDOL CONDENSATION PRODUCT	4.76	68000.000
	UNKNOWN ALCOHOL	5.19	100.000
	UNKNOWN	5.55	1300.000
	UNKNOWN ACID	6.08	110.000
	UNKNOWN	6.29	250.000
	UNKNOWN AROMATIC	14.22	140.000
	UNKNOWN	15.18	89.000
	UNKNOWN ACID	15.33	96.000
	UNKNOWN ACID	15.71	120.000
	UNKNOWN AROMATIC	16.17	99.000
	UNKNOWN	16.61	260.000
	UNKNOWN CARBOXYLIC ACID	19.70	240.000
	UNKNOWN	21.24	110.000
	UNKNOWN	21.29	110.000
	UNKNOWN	21.34	120.000
	UNKNOWN	21.47	210.000
	UNKNOWN	21.51	140.000
	UNKNOWN	22.09	300.000
	UNKNOWN	22.43	160.000
	UNKNOWN ALCOHOL	24.69	220.000
	UNKNOWN	25.24	510.000
	UNKNOWN	25.78	150.000
	UNKNOWN	26.00	120,000
	UNKNOWN	26.09	360.000
,	UNKNOWN	26.53	110,000
	UNKNOWN	29.11	270,000
	UNKNOWN	30.43	200.000
	UNKNOWN PAH	30.57	120.000
	UNKNOWN	31.19	190.000

CASE NO:	Semivolatile Analysis Data - Tentatively Identified Comp			
SDG NO:	ECMM8	ENDOINT ON THE NEW		
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	٥
	3-PENTEN-2-ONE, 4-METHYL-	3.93	5500.000	
	ALDOL CONDENSATION PRODUCT	4.97	140000.000	
	UNKNOWN ALCOHOL	5.26	150.000	
	UNKNOWN	5.59	2700.000	
	UNKNOWN	6.31	490.000	
	UNKNOWN	7.85	350.000	
	UNKNOWN ALCOHOL	8.37	790.000	
	UNKNOWN ACID	10.35	140.000+	
	UNKNOWN ACID	12.47	140.000	
	UNKNOWN	21.51	1000.000	
	UNKNOWN	22.14	1400.000	
	UNKNOWN	28.70	360.000	
TIE NAME	: ECMM8.SDG DATE: 11/10/98 TIME: 15:34 CADRE98		PAGE:	

# Semivolatile Analysis Data - ECMN9 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMM8

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION
	3-PENTEN-2-ONE, 4-METHYL-	3.92	370.000
	UNKNOWN	4.30	160.000
	UNKNOWN	4.40	340.000
	ALDOL CONDENSATION PRODUCT	4.80	120000.000
	UNKNOWN	5.56	2100.000
	UNKNOWN	6.30	410.000
	UNKNOWN	11.41	220.000
	BUTYLATED HYDROXYTOLUENE	11.68	220.000
	UNKNOWN ACID	15.71	430.000
	UNKNOWN	15.92	210.000
	UNKNOWN	16.05	230.000
	UNKNOWN	16.10	350.000
	UNKNOWN	16.63	290.000
	UNKNOWN	16.83	210.000
	UNKNOWN	16.93	160.000
	UNKNOWN ACID	17.32	530.000
	UNKNOWN AROMATIC	19.69	440.000
	UNKNOWN	21.34	320.000
	UNKNOWN	21.44	140.000
	UNKNOWN	21.49	140.000
	UNKNOWN	21.53	180.000
	UNKNOWN ALCOHOL	22.11	560.000
	UNKNOWN	22.43	240.000
	UNKNOWN	24.40	210.000
	UNKNOWN	25.76	220.000
	UNKNOWN	29.33	290.000
	UNKNOWN	30.46	240.000
	UNKNOWN	30.56	210.000
	UNKNOWN PAH	31.18	250.000

CASE NO: SDG NO:	Semivolatile Analysis Data - Tentatively Identified Compo			
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.30	130.000	
	UNKNOWN	4.42	390.000	
	ALDOL CONDENSATION PRODUCT	4.81	86000.000	
	UNKNOWN ALCOHOL	5.22	150.000	
	UNKNOWN	5.57	2300.000	
	UNKNOWN	6.30	420.000	
	UNKNOWN	6.46	160.000	
	UNKNOWN	8.36	87.000	
	UNKNOWN ACID	10.35	83.000	
	UNKNOWN ACID	12.47	97.000	
	UNKNOWN ACID	15.71	83.000	
	UNKNOWN ACID	17.50	130.000	
	UNKNOWN	18.95	100.000	
	UNKNOWN	21.53	480.000	
	UNKNOWN	22.15	740.000	
	UNKNOWN	22.44	240.000	
	UNKNOWN	29.19	130.000	
	UNKNOWN	30.01	180.000	

#### Semivolatile Analysis Data - ECMN5DL Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMM8

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.28	290.000	
	UNKNOWN	4.32	170.000	
	ALDOL CONDENSATION PRODUCT	4.76	120000.000	
	UNKNOWN ALCOHOL	5.18	140.000	
	UNKNOWN	5.53	1800.000	
	UNKNOWN	6.27	350.000	
	UNKNOWN ACID	12.46	140.000	
FILE NAME	: ECMM8.SDG DATE: 11/10/98 TIME: 15:34 CADRE98		PAGE	: 9

Semivolatile Analysis Data - ECMP1 Tentatively Identified Compounds  CASE NO: 26593 LABORATORY: IEA-NJ  SDG NO: ECMM8						
CAS NUMBER	COMPOUND NAME	ŔŢ	ESTIMATED CONCENTRATION C			
	UNKNOWN	4.31	130.000			
	UNKNOWN	4.46	280.000			
	ALDOL CONDENSATION PRODUCT	4.81	8000.000			
	UNKNOWN ALCOHOL	5.22	140.000			
	UNKNOWN	5.57	2200.000			
	UNKNOWN	6.29	380.000			
	UNKNOWN	6.44	150.000			
	UNKNOWN ALCOHOL	8.35	93.000			
	UNKNOWN ACID	12.45	100.000			
	UNKNOWN ACID	15.69	72.000			
	UNKNOWN	17.49	110.000			
	UNKNOWN ACID	18.93	88.000			

CASE NO: SDG NO:								
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q				
	UNKNOWN	4.32	490.000					
	ALDOL CONDENSATION PRODUCT	4.77	120000.000					
	UNKNOWN ALCOHOL	5.19	150.000					
	UNKNOWN	5.53	1900.000					
	UNKNOWN	6.27	520.000					
	UNKNOWN PAH	20.55	240.008*					
ILE NAME	ECMM8.SDG DATE: 11/10/98 TIME: 15:34 CADRE98		PAGE	:				

CASE NO: SDG NO:								
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q				
)	ALDOL CONDENSATION PRODUCT UNKNOWN UNKNOWN ALCOHOL	4.61 5.51 20.74	120000.000 1700.000 2600.000					
FILE NAME:	ECMM8.SDG DATE: 11/10/98 TIME: 15:34 CADRE98		PAGE	: 12				

Case #: 26593

SDG: ECMM8

Site: HIMCO DUMP, ELKHART

Lab.: IEANJ
Reviewer: S. Tobin
Date: 12/01/98

Sample Number:	ECMM8		ECMM9		ECMN5		ECMN6		ECMN8	
Sampling Location:	SB 08-0	. 5	SB 08-2		SB14-2		SB 14-6		SB13-2	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/20/98	8	10/20/98	8	10/20/98	3	10/20/98	3	10/20/98	3
%Moisture:	5		2		3		111		5	_
PH:					1		ļ			
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Chloromethane	10_	UJ	10_	עט	1_10_	_טַַ	11_		10	J
Bromomethane	10_		10_		10_		_11_			U
Vinyl Chloride	10_		10_		10_		111_		_10_	_u_
Chloroethane	10_		10_		10_		1_11_		10_	
Methylene Chloride	10_		10_		10_					_u_
Acetone	10_		10_		10_		111		10_	_u
Carbon Disulfide	10_		  10		10_		_11_	U_	10_	_~_
1,1-Dichloroethene	10_		10_		1_10_		111_		10_	. )
1,1-Dichloroethane	10_		10_		10_		_11_		10_	
Total 1,2-Dichloroethene	_10		10_		10_		   _11_		10_	
Chloroform	10_		10_		10_		_11_		10_	_U
1,2-Dichloroethane	10_		10_		10_		11_		1_10_	
2-Butanone	1_10_		10_		10_		111		1_10_	_U_
1,1,1-Trichloroethane	10_		  10		_10_				1_10_	_U
Carbon Tetrachloride	10_		10_		10_		11_		10_  : <u></u> 10_	_u
Bromodichloromethane	1_10_		_10_		10_		_11_		10_	
1,2-Dichloropropane	_10_		10_		10_		11_		10_	_U
Cis-1,3-Dichloropropene	10_		10_	U			11_		1_10_	_
Trichloroethene	10_		10_		10_		1_11_		1_10_	U
Dibromochloromethane	10_		_10_		10_		11_		1_10_	_u_
1,1,2-Trichloroethane	10_		10_		10_		11		1_10_	_u_ _u_
Benzene	10_		_10_		10_		1 _11		1_10_	_u_
Trans-1,3-Dichloropropene	10_		10_		10_				10_	_n
Bromoform	10_		10_		1_10_		1_11_		1_10_	
4-Methyl-2-pentanone	10_		_10_		10_	_00_		_00_		
2-Hexanone	10_		10_		10_		_11_   _11		_10_   _10_	_n_ _n_
Tetrachloroethene	10_		10_		1_10_		_11_		1_10_	
1,1,2,2-Tetrachloroethane	10_	U			1_10_		1_11_			_UJ.
Toluene	10_		10_		10_		_11_   _11_	U	_10_  _10_	_U_ _U
Chlorobenzene	10_		10_	_ʊ_			_11_   _11_			
Ethylbenzene	10_		10_		1_10_		1_11_		1_10_	_U_
Styrene	10_		1_10_		1_10_	_U		_u_		_U
Xylene (total)	10_		1_10_				111_		1_10_	- <u>'</u> ''-
[	·	-~-		_u_	1-10-		_11_	_u_	10_	U

Case #: 26593

SDG: ECMM8

Site:

HIMCO DUMP, ELKHART

Lab. : Reviewer: Date: IEANJ S. Tobin 12/01/98

	Sample Number:	ECMN9		ECMP0		ECMPOMS		ECMPOMSI	<del>_</del>	ECMP1	
	Sampling Location:	SB13-6		SB12-0.5	i	SB12-0.5		SB12-0.5	5	SB 12-2	j
	Matrix:	Soil		Soil		Soil		Scil		Soil	i
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	į
	Date Sampled:	10/20/98	3	10/20/98		10/20/98		10/20/98	3	10/20/98	
	%Moisture:	9		5		6		4		4	i
	PH:	1		1		1		1		j	i
	Dilution Factor:	1.0		1.0		1.0		1.0		1.0	į
		!		1		l				1	
	Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
***	,	1		1		l		l		1	
	Chloromethane	11_	_บJ_	_10_	_ບJ_	1_11_	_ບJ	1_10_	UJ_	_10_	゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙゙
	Bromomethane	]_11_	_U_	1_10_	_U_	1_11_	_ʊ	10_	_U_	_10_	_U
	Vinyl Chloride	1_11_	_u_	10_	U	]_11_		10_		1_10_	_u
	Chloroethane	11_	_UJ_	10_	UJ_	111_	_UJ	_10_			UJ
	Methylene Chloride	1_11_	_U_		_U_	11_	_U_	10_	U		
	Acetone	1_11_		1_10_	_U	11_				1_10_	
	Carbon Disulfide	1_11_	_U_	1_10_		1_11_	U			1_10_	_ui
. بسد	1,1-Dichloroethene	_11_	_U_	10_		47_		55_		1_10_	_U_
	1,1-Dichloroethane	1_11_	_U_	_10_		11_		10_		10_	_U_
	Total 1,2-Dichloroethene	11_		10_		11_		10_		10_	_บ_
	Chloroform	11_		10_		111	_U_			1_10_	_U_
	1,2-Dichloroethane	1_11_		1_10_		1_11_		10_		1_10_	
	2-Butanone	11_		10_	_u			10_		10_	_u_
	1,1,1-Trichloroethane	11_	_U_	_10_	_U	11_	U	10_	_u		_U_
	Carbon Tetrachloride	_11_	U	10_						10_	
	Bromodichloromethane	1_11_	U	[_10_	_ʊ_	,	_u	[_10_		10_	
	1,2-Dichloropropane	_11_		10_			_u_	_10_		10_	_U
2 PP	Cis-1,3-Dichloropropene	111_		10_		11_		10_		1_10_	
	Trichloroethene	11_		10_		56_		_60_		10_	
	Dibromochloromethane	11_		10_		11_	Ū	10	U	10_	_u_
	1,1,2-Trichloroethane	1_11_		1_10_		11_		10_		10_	U
	Benzene	1_11_		1_10_		54_		_58_		_10_	_U
	Trans-1,3-Dichloropropene	1_11_		10_		111	_U_	10	U	10_	U
	Bromoform	_11_	_ʊ	]_10_	ບJ					10_	_บับ }
	4-Methyl-2-pentanone	11_	_U:	10_	U	1_11_	U	10_	_u		U
	2-Hexanone	1_11_		1_10_		11	_u_	_10_		10_	U
	Tetrachloroethene	[11]	_บัง			111				1_10_	ับมี
	1,1,2,2-Tetrachloroethane	1_11_	U			11_	-	10_		1_10_	U
	Toluene	11		_10_		54_		57_		10_	
	Chlorobenzene	111_		10_		   _52_		57_		10_	
	Ethylbenzene	111_		_10_		11_		10_		10_	
	Styrene	111_		10_		11_		10_		10_	
	Xylene (total)	11_		10_		11_		10_		10	_u
		<u> </u>						i	~~~		

Case #: 26593

SDG: ECMM8

Site:

HIMCO DUMP, ELKHART

Lab.:
Reviewer:
Date:

IEANJ S. Tobin 12/01/98

Sample Number:	ECMP2		1				1		1	
Sampling Location:	SB 12-6				i					
Matrix:	Soil				1		1			
Units:	ug/kg				1					
Date Sampled:	10/20/98									
%Moisture:	, _ , _ , , ,									
PH:	İ									
Dilution Factor:	1.0				<u> </u>		<u> </u>			
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flaç
Chloromethane	 10		(							
Bromomethane	10_						i ———			
Vinyl Chloride	_10_				}					
Chloroethane	10	UJ			1		1		i ———	
Methylene Chloride	_10_									
Acetone	_10_						i			
Carbon Disulfide	_10_							-		
1,1-Dichloroethene	10_									· )
1,1-Dichloroethane	_10_				i ———		! <del></del>			
Total 1,2-Dichloroethene	_10_				i ———				i	
Chloroform	_10_								' ———	
1,2-Dichloroethane	_10_	_ʊ_			¦		' <del></del>		i ———	
2-Butanone	10_		i				·		<u> </u>	<del></del>
1,1,1-Trichloroethane	10_				·				¦ ———	<del></del>
Carbon Tetrachloride	10						' <del></del>			
Bromodichloromethane	_10_	U			i ————		<del></del>		· ————	
1,2-Dichloropropane	_10_						<del></del>		<del></del>	
Cis-1,3-Dichloropropene	_10_	_บ_	¦		·		¦		¦ ———	
Trichloroethene	_10_		¦		·		/			_
Dibromochloromethane	_10_	U	' <del></del>		'		' <del></del>		·	-
1,1,2-Trichloroethane	_10_		¦ ————		! ————				! <del></del>	
Benzene	_10_		·		¦		; <del></del>			
Trans-1,3-Dichloropropene	_10_				¦ <del></del>				¦ —	
Bromoform	_10_	_n1	\				·			
4-Methyl-2-pentanone	_10_	U					!		1	
2-Hexanone	_10_	_ʊ_	! <del></del>		! ————— !		!			
Tetrachloroethene	_10_		¦		1				·	
1,1,2,2-Tetrachloroethane		U	1		!		1		† —	
Toluene	_10_	U	·		¦		{ <del></del>		!	
Chlorobenzene	_10_	_0_	!		i		!			
Ethylbenzene	_10_		!		! <del></del>		·		ļ ———	
Styrene		U	·		·				1	
Xylene (total)	_10_	U	!				!			
varene (corat)	_10_	_U_	l		1		I		l	

Case #: 26593

SDG: ECMM8

Site:

HIMCO DUMP, ELKHART

Lab. : Reviewer:

IEANJ S. Tobin

Date: 12/01/98

-				1						1	
	Sample Number:	ECMM8	_	ECMM9		ECMN5		ECMN5DL		ECMN6	
	Sampling Location:	SB 08-0.	5	SB 08-2		SB14-2		SB14-2		SB 14-6	
	Matrix:	Soil		Soil		Soil		Soil		Soil	;
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
	Date Sampled:	10/20/98		10/20/98	}	10/20/98		10/20/98		10/20/98	3
	%Moisture:	5		2		3		3		11	
	PH:	6.6		7.5		6.8		6.8		6.8	
	Dilution Factor:	1.0		1.0		1.0		2.0		1.0	
	Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
	Phenol	350	<del></del>	340_	- <del></del>	340_	<del></del>			370	
	bis(2-Chloroethyl)ether	350_				340_				_370_	~ <u>u</u> —
	2-Chlorophenol	350_	_u	340_			_ <u>u_</u> _	_680_		370_	_U
	1,3-Dichlorobenzene	350_	_	340 <u> </u>		340_		_680_		370_	_ <u>"</u> _
	1,4-Dichlorobenzene	_350_  _350_		-		340_		_680_		370_	_U
	1,2-Dichlorobenzene	_350_   350		_340_  _340_		_340_	_U	_680_	_ <u>u_</u> _	370_	_ <u>v_</u> _
	2-Methylphenol	· — —				340_		_680_		370_	_U
1	2,2'-oxybis(1-chloropropan	350_		340_	_	_340_	_ <u>''</u> _	. — —		370_	_u
,	4-Methylphenol		- <u>n</u> -	_340_	- <u>u</u> -	_340_	_ <u>",</u> _	_680_	- <u>"-</u>		_U
	·	350_		340_		340_		_680_		_370	- <u>u</u> -
	N-Nitroso-di-n-propylamine			340_		_340_		_680_		_370	_u
	Hexachloroethane	350_		340_		_340_	_u_	_680_		370_	_u
	Nitrobenzene	_350_		_340_		_340_	U			370_	_u_
	Isophorone	_350_	-	_340_		_340_		_680_		_370_	_U_
	2-Nitrophenol	_350_	U	_340_		_340_	-u-	_680_		_370	_ʊ
	2,4-Dimethylphenol	_350_		_340_		_340_		_680_		_370_	_U
	bis(2-Chloroethoxy)methane			_340_		_340_	_U	_680_		370_	_U
DF-	2,4-Dichlorophenol	_350_		_340_		_340_		_680_		_370_	_U_
į	1,2,4-Trichlorobenzene	_350_		_340_		_340_		_680_		370_	_U_
	Naphthalene	_350_		_340_		_340_	_U_	_680_		120_	_J_
	4-Chloroaniline	]_350_		340_		_340_	_U	_680_	_UJ_	370_	_U_
	Hexachlorobutadiene	_350_		340_		_340_		_680_	_UJ_	370_	_U_
	4-Chloro-3-methylphenol	_350_		1_340_		_340_	_U_	_680		370_	_U_
	2-Methylnaphthalene	_350_		_340_	_U	_340_	_U_	_680_	_u_	370_	_U_
	Hexachlorocyclopentadiene	]_350_	_U	340_	U		_U_	_680_	_u_	370_	_u
	2,4,6-Trichlorophenol	350_		340_	_u_	340_	_U_	_680_	_บ	_370_	_ບ
	2,4,5-Trichlorophenol	1_870_	_U	1_850_	_υ_	860_	_u_	1700_	_U_	1_930_	_U
	2-Chloronaphthalene	350_	U	340_	_U_	1_340_	_บ_	_680_	_U_	370_	
	2-Nitroaniline	_870_'	_บ_	_850_	_ʊ_	_860_	_U_	1_1700_	_U_	930_	_บ
	Dimethylphthalate	_350_	_U_	340_				680		370	
	Acenaphthylene	350_	U	340		340_		680		370	_ʊ_
	2,6-Dinitrotoluene	350		340_		340_		_680_		370	
	3-Nitroaniline	_870_	_ʊ_	850_		_	ָ <u>บ</u>	1700		930_	
	. ,	i -				i		-			
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Case #: 26593

SDG: ECMM8

Site:

HIMCO DUMP, ELKHART

Lab.: Reviewer: Date: IEANJ S. Tobin 12/01/98

Sample Number:	I ECMM8		ECMM9		ECMN5		ECMNSDL		ECMN6	
Sampling Location:	SB 08-0.	5	SB 08-2		SB14-2		SB14-2		SB 14-6	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		uq/ka		ug/kg	
Date Sampled:	10/20/98	}	10/20/98		10/20/98		10/20/98		10/20/98	
%Moisture:	5		2	•	3		3		111	
PH:	6.6		7.5		6.8		6.8		16.8	
Dilution Factor:	1.0		1.0		1.0		2.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flac
Acenaphthene	350_		340_	U	340_		680_	<del>-</del>	370_	 _U
2,4-Dinitrophenol	870_		850_		860				930_	_ט_
4-Nitrophenol	870		850_		860		1700		930_	
Dibenzofuran	350_	_u	340		340_		680_		370	
2,4-Dinitrotoluene	350_		340_		340		680		370_	
Diethylphthalate	1_350_	_U_	_340_	U	340	ับ	_680_	"ט	_370_	ับ
4-Chlorophenyl-phenylether	350_	_U_	]_340_	_ប_	340_	_u_	_680_		370_	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Fluorene	350_	_บ	_340_	_U	340_		_680_		370	
4-Nitroaniline	_870_	_U_	_850_	U	_860_		1700		930	ַ ט_
4,6-Dinitro-2-methylphenol	870_	_U_	850_	_U_	_860_	U	_1700_		930	
N-Nitrosodiphenylamine	_350_	_U_	340_	_U_	_340_		_680_		370_	U
4-Bromophenyl-phenylether	_350_	_u_	340_	_U_	_340_		_680_		370_	
Hexachlorobenzene	_350_	_U_	340_	_`U	340_		680		370_	U
Pentachlorophenol	_870_	_U_	850_	_U_	_860_		_1700_		930_	
Phenanthrene	_350_	_U_	_340_		_340_		_680		370_	_บ_
Anthracene	_350_	_U_	340_	_U_	_340_	_u_	680		370_	_ิบ
Carbazole	_350_	_U_	_340_	_U_	_340_	_ʊ_	680	_u		
Di-n-butylphthalate	_350_	_U_	340_	_U_	340_	_U_	_680_		370_	
Fluoranthene	_350_	_U_	340_	_U	_340_		_680_		44_	_J_
Pyrene	_350_	_U	340_	_U_	40_		_680_		53_	_J
Butylbenzylphthalate	_350_	_u_	_340_	_U	_340_		_680_		370_	
3,3'-Dichlorobenzidine	350_	_U_	340_	_U_	340_	U	_680		370_	
Benzo(a)anthracene	350_	_U_	340_	U	340		680	ับ		
Chrysene	_350_	_U	340_	_U_	_340_		_680_		370	_U
bis(2-Ethylhexyl)phthalate	_360_		1500_		3700_		_2900_		20000_	
Di-n-octylphthalate	350_	_U_	340_	Ŭ	340_	U	680	Ū	370_	_U_
Benzo(b)fluoranthene	]_350_		340_		340_		_680_		52_	_J_
Benzo(k)fluoranthene	] _350_	+ _ບ_	340_		340_		_680_		370_	
Benzo(a)pyrene	_350_	_U_	_340_	_ʊ	340_		_680_		370_	
Indeno(1,2,3-cd)pyrene	_350_	_ʊ	340_		340_		_680_		370_	
Dibenz(a,h)anthracene	350_		340_		340_		_680_		370_	
Benzo(g,h,i)perylene	_350_		340_		340_		_680_		38_	_J_
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				-						-1

Case #: 26593

SDG: ECMM8

Site: Lab. : HIMCO DUMP, ELKHART

IEANJ S. Tobin Reviewer: 12/01/98 Date:

		_									
-	Sample Number:	ECMN6DL		ECMN8		ECMN9		ECMP0		ECMPOMS	
	Sampling Location:	SB 14-6		SB13-2		SB13-6		SB12-0.5	;	SB12-0.5	5
	Matrix:	Soil		Soil		Soil		Soil		Soil	İ
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	i
	Date Sampled:	10/20/98		10/20/98		10/20/98		10/20/98	}	10/20/98	3
	%Moisture:	111		5		9		5		6	j
	PH:	6.8		9.6		7.7		6.3		6.1	
	Dilution Factor:	20.0		11.0		1.0		1.0		1.0	1
	Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flaç	Result	Flag
-1 19 <i>0</i> 7		!		ļ <del></del>		!		ļ —		ļ	!
	Phenol	_7400_		_350_		_360_		_350_	_u_	_2100_	
	bis(2-Chloroethyl)ether	7400_		_350_	_U_			_350_	_u_	_350_	_0
	2-Chlorophenol	_7400_		_350_		_360_		_350_		_2100_	
	1,3-Dichlorobenzene	_7400_	_U	_350_		360_		_350_		_350_	U
	1,4-Dichlorobenzene	_7400_	_u_	_350_		_360_	_u_	_350_	_U	1100_	
.	1,2-Dichlorobenzene	7400_		_350_		_360_		_350_		_350_	_U
	2-Methylphenol	_7400_		_350_		_360_		_350_		_350_	_U
	2,2'-oxybis(1-chloropropan	_7400_	_U	_350_		_360_		_350_		_350_	_U
i	4-Methylphenol	7400_		_350_		_360_		_350_		_350_	_U
	N-Nitroso-di-n-propylamine	· <del>-</del> -		_350_		_360_		_350_		1200_	
1	Hexachloroethane	7400_	_U	_350_		1_360_		_350_		_350_	_U_ i
	Nitrobenzene	_7400_		350_		_360_		_350_		_350_	_U !
i	Isophorone	7400_		_350_		1_360_		_350_		_350_	_U :
1	2-Nitrophenol	_7400_	_U	_350_	_U	1_360_		_350_	_ŋ	350_	_U
!	2,4-Dimethylphenol	7400_		_350_	_u_	_360_		_350_	_U		_U `
	bis(2-Chloroethoxy)methane	7400_		_350_		1_360_		_350_		350_	_U
	2,4-Dichlorophenol	7400_	_U	]_350_		360_	_U_	_350_		350_	_U
- (10-	1,2,4-Trichlorobenzene	7400_	_u	_350_		360_		_350_		1200_	
(	Naphthalene	7400_		_350_		360_		_350_		_350_	_U_
	4-Chloroaniline	_7400_		_350_	_u_	360_		_350_		350_	_U
	Hexachlorobutadiene	7400_		350_	_U	360_		_350_		_350_	_U
	4-Chloro-3-methylphenol	7400_		_350_		360_		350		_2200_	
	2-Methylnaphthalene	7400_		_350_	_u_	1_360_		350_		350_	_U
	Hexachlorocyclopentadiene	_7400_	_u_	_350_	_u			350_		_350_	_U
	2,4,6-Trichlorophenol	_7400_	_u_	_350_		360_		350_		350_	_u_
	2,4,5-Trichlorophenol	19000_	_U_	_870_	_u_	910_	_ʊ	870_	_ʊ_	_880_	_U
	2-Chloronaphthalene	_7400_	_u	_350_	_u_	_360_	_u_	_350_	_U_	_350_	_U_
	2-Nitroaniline	19000_				910_		_870_		_880_	_u_
	Dimethylphthalate	7400_	_u_			1_360_		350_		350_	_U
	Acenaphthylene	_7400_	_u_	350_		]_360_	_ʊ		_u_		_U_
	2,6-Dinitrotoluene	_7400_	_U	· — —		_360_		350_	_U	_350_	_U
	3-Nitroaniline	19000_	_U_	870_	_U_	910_	_u	870_	_u_	_880_	_U_
		l				1		1		1	

Case #: 26593

SDG: ECMM8

Site:

HIMCO DUMP, ELKHART

Lab.: IEANJ
Reviewer: S. Tobin
Date: 12/01/98

. <del></del>										
Sample Number:	ECMN6DL		ECMN8	· ·	ECMN9		ECMP0		ECMPOMS	
Sampling Location:	SB 14-6		SB13-2		SB13-6		SB12-0.5	5	SB12-0.	5
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/20/98	;	10/20/9	8	10/20/98	3	10/20/98	3	10/20/9	3
%Moisture:	11		5		9		5		6	
PH:	6.8		9.6		7.7		6.3		6.1	
Dilution Factor:	20.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Fla
Acenaphthene	7400	U	350_		360_		350_		1300_	
2,4-Dinitrophenol	19000		870		910_		870_		880_	_U_
4-Nitrophenol	19000		870		910_				_2100	
Dibenzofuran	7400_		350_		360		350_		350_	_U_
2,4-Dinitrotoluene	7400		350_		360_		350_		1300_	
Diethylphthalate	7400		350		360_		350_	ָ "บ		Ü
4-Chlorophenyl-phenylether			350		360		  350		350_	7
Fluorene	7400		350		360_		350_		350	
4-Nitroaniline	19000			u			870_	_ʊ_	_880_	Ū
4,6-Dinitro-2-methylphenol	19000		870		910		870_		_880_	
N-Nitrosodiphenylamine	7400_		]_350_		360_		350_		350_	
4-Bromophenyl-phenylether	7400	_u_			360_		350_		350	
Hexachlorobenzene	7400_		_350_		360_		350		350	
Pentachlorophenol	19000		870_		910_		870		2000_	
Phenanthrene	7400_		_350_					_ט_		_U_
Anthracene	7400_		_350_		360_		350_		350_	
Carbazole	7400		_350_		360		350_		350	
Di-n-butylphthalate	7400_		350_						350	· _U_
Fluoranthene	7400		350_				350_		350	
Pyrene	7400		_350_		_44_		350_		:	
Butylbenzylphthalate	7400		350	_ט_	_360_		350_		350	_U_
3,3'-Dichlorobenzidine	7400		_350_		360_				_350_	
Benzo(a)anthracene	7400		_350_		360_		_350_			U
Chrysene	7400_		_350_		360_		_350_		350_	
bis(2-Ethylhexyl)phthalate			150		960		440		530_	
Di-n-octylphthalate	7400	_U_	_350		_360_		350_	_U_	350_	_U_
Benzo(b) fluoranthene	7400	 ט	350	 U	38_	_J_	350		350	_u_
Benzo(k) fluoranthene	7400		350_		360_		350_		350	
Benzo(a) pyrene	7400		350_		360_	_u_	350_		_350_  _350_	_U_
Indeno(1,2,3-cd)pyrene	7400_		350	บ	360		350		350_	_U_
Dibenz (a, h) anthracene	7400_		350		360_		350_		350_	_°_ _ʊ_
Benzo(g,h,i)perylene	7400_		350_		360_		350_		350_	U
	l		l				l			

Case #: 26593

SDG: ECMM8

Site:

HIMCO DUMP, ELKHART

Lab. :
Reviewer:
Date:

IEANJ S. Tobin 12/01/98

Sample Number:	ECMPOMSE	,	ECMP1		ECMP2					
Sampling Location:	SB12-0.5		SB 12-2		SB 12-6		ł			
Matrix:	Soil		Soil		Soil		)		]	
Units:	ug/kg		ug/kg		ug/kg				1	
Date Sampled:	10/20/98		10/20/98		10/20/98	ı				
%Moisture:	4		4		5				1	
PH:	5.8		6.5		6.9		1			
Dilution Factor:	1.0		1.0		2.0					
Semivolatile Compound	Result	Flag	Result	Flaç	Result	Flag	Result	Flag	Result	Flag
Phenol	2000_		340		  _690_					
bis(2-Chloroethyl)ether	_340_	_ʊ_	340_		690_					
2-Chlorophenol	2000_		340		690_					
1,3-Dichlorobenzene	340	_บ_	340		690					
1,4-Dichlorobenzene	1100		340	U				~	j	
1,2-Dichlorobenzene	_340_		340			_u_			i	
2-Methylphenol	340_		340							
2,2'-oxybis(1-chloropropan	340	U	340		690_				1	
4-Methylphenol	340		340		690		1			
N-Nitroso-di-n-propylamine			340_		_690_		1			
Hexachloroethane	340_		340_		690_					
Nitrobenzene	340		340		690_	_ U_				
Isophorone	340		_340_		690	U				
2-Nitrophenol	340		340_		690					
2,4-Dimethylphenol	340		340_		_690_				1	
bis(2-Chloroethoxy) methane			340_		690	U	1			
2,4-Dichlorophenol	_340_		_340_		_690_		1			
1,2,4-Trichlorobenzene	1200_		340		690					
Naphthalene	340_	U	340_		690		i		•	
4-Chloroaniline	340_		340_							
Hexachlorobutadiene	340		340	_ບປ		ຼືບປັ	1			
4-Chloro-3-methylphenol	2100_		_340_		690_					
2-Methylnaphthalene	340	U	340		690				i	
Hexachlorocyclopentadiene	340		340_		690_	U				
2,4,6-Trichlorophenol	340		340_							
2,4,5-Trichlorophenol	860_	-"- ט	860		1700					
2-Chloronaphthalene	340	ט			690					
2-Nitroaniline	860_	_U_				U			\	
Dimethylphthalate	340		340		690					
Acenaphthylene	340_		: <b>-</b> -	_ <b>_</b> U	690	_ <u>_</u>		<del>-</del>	\	
2,6-Dinitrotoluene	340_		340_		_	_u_ _u_			<u> </u>	
3-Nitroaniline	860_		860				' <del></del>		·	
		_~~		-~-	1	_~_				
( <del></del>	I		· ———		· ———		1		·	

Case #: 26593

SDG: ECMM8

Site:

HIMCO DUMP, ELKHART

Lab. :
Reviewer:
Date:

IEANJ S. Tobin 12/01/98

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Sample Number:	ECMPOMSI		ECMP1		ECMP2		1		l	
Sampling Location:	SB12-0.5	5	SB 12-2		SB 12-6				l	
Matrix:	Soil		Soil		Soil		1			
Units:	ug/kg		ug/kg		ug/kg					
Date Sampled:	10/20/98	3	10/20/9	8	10/20/98	3				
%Moisture:	4		4		5		·			
PH:	5.8		6.5		6.9		l			
Dilution Factor:	1.0		1.0		2.0					
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	-la
Acenaphthene	1300_		340_	U	690_					
2,4-Dinitrophenol	_860_	ັ_ປ_	_860_	_U_	1700_	_U_				
4-Nitrophenol	2100_		860_	_บ_	_	_u_				
Dibenzofuran	340_	_U_	340_		690_	_u_				
2,4-Dinitrotoluene	1300_		340_	_U_	690	_บ_				
Diethylphthalate	_340_	Ū	340_	ับ	690	_U_				
4-Chlorophenyl-phenylether	340_		340		690					- 7
Fluorene	340_	_υ_	340_	U	690	U				
4-Nitroaniline	860	U	860		1700					_
4,6-Dinitro-2-methylphenol	860_	_u_	860_	_u_	1700					
N-Nitrosodiphenylamine	340_	_U_	340_						1	
4-Bromophenyl-phenylether	340		340		_690	_u_				
Hexachlorobenzene	340_		340_		_690_	· _u_				
Pentachlorophenol	1900_		_860_		1700_					
Phenanthrene	340_	_U_	340	_u_	690					
Anthracene	340	U	340_		690				i	
Carbazole	340	_u_	340_			_u_				
Di-n-butylphthalate	340_		340_		_					
Fluoranthene	340		340_							
Pyrene	1500_		340_		_690				1	
Butylbenzylphthalate	340	U	340_						-	
3,3'-Dichlorobenzidine	340_		340_		690		-			
Benzo(a) anthracene	340_				690	U				
Chrysene	340	U	340_		690_	U	i			
bis(2-Ethylhexyl)phthalate			290_	J	_3400_		-			
Di-n-octylphthalate	340_	_U_	340		690	Ū	!		1	
Benzo(b) fluoranthene	340_		_340_		_690_	_U_				<del>- ·</del>
Benzo(k) fluoranthene	340	U_	340_		690	_0_	1			
Benzo(a) pyrene	340	U	340_			_0_	<u> </u>			
Indeno(1,2,3-cd)pyrene	340_	U	340_	_u_	-	_u_ _u_				
Dibenz(a,h)anthracene	340_	_U	340_		690		!			
Benzo(g,h,i)perylene	340_		340_		_	_ <u>n</u> _	-		1	
benzo(g,n,r)peryrene	1 _340_	_u_	_340_	_u_	690_	_u_				



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	November 10, 1998	<u>8</u> .	
SUBJECT:	Review of Data Received for Review	w on November 3, 1998	
FROM:	Stephen L. Ostrodka Superfund Technical	a, Chief (SRT-4J)  1 Support Section	
TO:	Data User:	USACE	
	eviewed the data by	CADRE for the following cas	3e:
CASE NUMBI	ER: 26593	SDG NUMBER:	MEBQD5
Number and	d Type of Samples: _	3 water, 17 soil	rretals
`ample Nur	mbers: <u>MEBOD5-9;</u> M	MEBOE0-9; MEBOF0,4; MEBOG4-6	5
Laboratory	y:SVL	Hrs. for Review:	19
Following	are our findings:		+1
All a descr	tata are use ibed in the ar	able with the que ttached varrativ	alifications e.
		/ FINKelbere-	
		L. FINKelbere- 11-16-98	

Region 5 TPO
Mail Code: SM-5J

Page 2 of 8
SDG Number: MEBQD5
Laboratory: SVL

Case Number : 26593 Site Name: Himco Dump

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

3 water samples (numbered MEBQE8, MEBQE9, and MEBQF0) and 17 soil sample (numbered MEBQD5-9, MEBQ0-7, MEBQF4, and MEBQG4-6) were collected on October 19 and 20, 1998. The lab received the samples on October 20 and 21, 1998. The metals aliquots for the water samples were insufficiently preserved to a pH of 3. All samples were analyzed for metals and cyanic All samples were analyzed using CLP SOW ILMO4.0 analysis procedures.

Mercury analysis was performed using a Cold Vapor AA Technique. Cyanide analysis was performed using the MIDI Distillation procedure. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectrometric procedure.

Reviewed By: <u>J. Ganz</u>
Date: <u>November 10, 1998</u>

Page 3 of 8

Case Number: 26593 SDG Number: MEBQD5
Site Name: Himco Dump Laboratory: SVL

#### T. HOLDING TIME:

HOLDING TIME CRITERIA

Inorganic

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	Holdi:	ng Time		pH
	Primary	Expanded	Primary	Expanded
Metals	180	0	2.0	0.0
Mercury	28	0	2.0	0.0
Cyanide	14	0	12.0	0.0

DC-280: The following inorganic soil samples were reviewed for holding time violations using criteria developed for water samples.

MEBQD5, MEBQD6, MEBQD7, MEBQD8, MEBQD9, MEBQE0

MEBQE1, MEBQE2, MEBQE3, MEBQE4

MEBQE5, MEBQE6, MEBQE7, MEBQF4, MEBQG4, MEBQG5

MEBQG6

The following results are associated with samples that were improperly preserved.

Hits are qualified "J"; non-detects are qualified "UJ".

#### MEBOE8

Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium Thallium, Vanadium, Zinc

#### MEBQE9

Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodiur Thallium, Vanadium, Zinc

## MEBQF0

Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium Thallium, Vanadium, Zinc

#### 2. CALIBRATIONS:

CALIBRATION CRITERIA

Inorganic

Reviewed	By:	J. G	anz		
Date	:	November	10,	1998	

Page 4 of 8
Case Number: 26593
Site Name: Himco Dump

Page 4 of 8
SDG Number: MEBQD5
Laboratory: SVL

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# Percent Recovery Limits

	Pri	mary	Expar	nded
	Low	High	Low	High
Cyanide	85.00	115.00	70.00	130.00
AÃ	90.00	110.00	75.00	125.00
ICP	90.00	110.00	75.00	125.00
Mercury	80.00	120.00	65.00	135.00

No problems were found for this qualification.

#### 3. BLANKS:

LABORATORY BLANKS CRITERIA

DC-283: The following inorganic samples are associated with a blank analyte with negative concentration whose absolute value is greater than the instrument detection limit (IDL). The sample result is greater than the detection limit but less than 5 times the absolute value of the blank.

Hits are flagged "J".

Copper MEBQE3, MEBQE4, MEBQE5

DC-284: The following inorganic samples are associated with a blank concentration which is greater than the instrument detection limit (IDL). The sample concentration is also greater than the IDL and less than five times the blank concentration. Hits are qualified "J" and non-detects are not flagged.

Aluminum MEBOE8

Beryllium

MEBQD5, MEBQD6, MEBQD7, MEBQD8, MEBQD9, MEBQE0 MEBQE1, MEBQE2, MEBQE3, MEBQE4, MEBQF4, MEBQG4

MEBQG5, MEBQG6

Cobalt

MEBQD5, MEBQD6, MEBQD8, MEBQD9, MEBQE0, MEBQE1 MEBQE2, MEBQE6, MEBQE7, MEBQF0, MEBQF4, MEBQG4

MEBQG5, MEBQG6

Lead

MEBQD5, MEBQD7, MEBQE6

Reviewed By: <u>J. Ganz</u>
Date: <u>November 10, 1998</u>

Page 5 of 8 se Number : 26593 SDG Number: MEBQD5 te Name: Himco Dump Laboratory: SVL Manganese MEBQE9 Nickel MEBQD5, MEBQD6, MEBQD9, MEBQE0, MEBQE1 MEBQE2, MEBQE6, MEBQE7, MEBQE8, MEBQG4 MEBQG5, MEBQG6 Potassium MEBQD5, MEBQD6, MEBQD7, MEBQD8, MEBQD9, MEBQE0 MEBQE2, MEBQE4, MEBQE6, MEBQE8, MEBQE9, MEBQF4 MEBQG4, MEBQG5, MEBQG6 Sodium MEBQD5, MEBQD6, MEBQD7, MEBQD8, MEBQD9, MEBQE0 MEBQE1, MEBQE2, MEBQE3, MEBQE5, MEBQE6 MEBQF4, MEBQG4, MEBQG5, MEBQG6 Vanadium MEBQD5, MEBQD6, MEBQD8, MEBQE1, MEBQE2, MEBQE3 MEBQE4, MEBQE5, MEBQE6, MEBQE7, MEBQF4, MEBQG4 MEBOG5, MEBOG6 Zinc MEBOF0 Cyanide MEBQD5, MEBQD6, MEBQD8, MEBQD9, MEBQE0, MEBQE1 MEBQE2, MEBQE4, MEBQE5, MEBQE6, MEBQE8, MEBQE9 MEBQF0, MEBQG4, MEBQG5, MEBQG6 DC-338: During review of the following inorganic samples, the reported IDL/default CRDL value was used for cyanide. MEBQD5, MEBQD6, MEBQD7, MEBQD8, MEBQD9, MEBQE0 MEBQE1, MEBQE2, MEBQE3, MEBQE4 MEBQE5, MEBQE6, MEBQE7, MEBQE8 MEBQE9, MEBQF0, MEBQF4, MEBQG4, MEBQG5, MEBQG6 4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE: MATRIX SPIKE CRITERIA Inorganic

Reviewed By: J. Ganz
Date: November 10, 1998

Percent Recovery Limits

125.0

Upper

Page 6 of 8

Case Number: 26593 SDG Number: MEBQD5
Site Name: Himco Dump Laboratory: SVL

Lower 75.0 Extreme lower 30.0

DC-268: The following inorganic samples are associated with a matrix spike recovery which is low, indicating that sample results may be biased low.

Hits are qualified "J" and non-detects are qualified "UJ".

Arsenic

MEBQD5, MEBQD6, MEBQD7, MEBQD8, MEBQD9, MEBQE0

MEBQE1, MEBQE2, MEBQE3, MEBQE4, MEBQE5

MEBQE6, MEBQE7, MEBQF4, MEBQG4, MEBQG5, MEBQG6

Selenium

MEBQE8, MEBQE9, MEBQF0

No problems were found for the laboratory control sample.

#### 5. LABORATORY AND FIELD DUPLICATE

No problems were found for this qualification.

#### 6. ICP ANALYSIS

No problems were found for this qualification.

#### 7. GFAA ANALYSIS

DC-324: The following inorganic samples have furnace AA post-digest spike percent recoveries which are out of control. The sample results are less than 50% of the spike concentration.

Hits are qualified "J" and non-detects are qualified "UJ".

Arsenic

MEBQD8, MEBQE1, MEBQE2, MEBQE3, MEBQE4 MEBQE5, MEBQE7, MEBQF4, MEBQG5, MEBQG6

Lead

MEBQD5, MEBQE6, MEBQE8, MEBQE9, MEBQF0 MEBQG6

Selenium MEBQD7, MEBQG5

The reviewer added a "W" flag to the MEBQF0 Pb result on form 1.

DC-326: The following inorganic samples were associated with MSA analy for which incorrect spike amounts were used.

Reviewed By: <u>J. Ganz</u>
Date: November 10, 1998

Page 7 of 8

Case Number: 26593 SDG Number: MEBQD5 Site Name: Himco Dump Laboratory: SVL

Hits are qualified "J".

Arsenic

MEBQD5, MEBQD7, MEBQE0, MEBQE6, MEBQF0, MEBQG4

Lead

MEBQE3, MEBQE4, MEBQE5, MEBQE7, MEBQF4

#### 8. SAMPLE RESULTS

All data, except those qualified above, are acceptable.

Reviewed By: J. Ganz Date: November 10, 1998

Page 8 of 8 SDG Number: MEBQD5 Laboratory: SVL

Case Number : 26593 Site Name: Himco Dump

# CADRE Data Qualifier Sheet

<u>Oualifiers</u>	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
ບັນ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The data are unusable. (The compound may or may not boresent)

Case #: 26593

SDG: MEBQD5

Site:

Himco Dump SILVER

Lab. : Reviewer:

J. Ganz

Date:

November 10, 1998

Sample Number: Sampling Locatio Matrix: Units: Date Sampled: % Solids: Dilution Factor:	MEBQE8 WT102A Water ug/L 10/19/98 0.0	8	MEBQE9 WT112A Water ug/L 10/20/9 0.0	8	MEBQF0 WT114A Water ug/L 10/20/9 0.0					
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aluminum	27.6	J	26.0	UJ	26.0				<del></del>	
Antimony	_42.2_		_42.2_	_ັບປ_	_42.2_	_ບJ_				
Arsenic	_0.90_	_uj_	0.90_	_ັບJ_	_24.3_					
Barium	47.3	_J _	36.6	_J	_238	_J				
Beryllium	_0.60_		0.60		_0.60_	_ʊɹ_				
Cadmium	_4.6_		4.6		4.6	_uj_				
Calcium	_17100	_J	19000	_J	_27000					
Chromium	_20.3_		_7.5_	_J	_12.0_	J				
Cobalt	_7.8_	UJ	7.8		_11.9_	_J				
Copper	4.1_		_4.1_	_UJ_	_4.1_					
Iron	_96.8_	_J	_11.7_		_17900	_J				
Lead	_0.50_	_UJ_	_0.50_		_0.50_	_UJ_				
Magnesium	16600	_J	14000	_J	24800	_J				
Manganese	_61.5_	_J	_6.7_		_306_	_J				
Mercury	_0.10_	_J	_0.10_	_บป_	_0.10_	_UJ_				
Nickel	73.0_	_J	_28.3_		_28.3_	_UJ_				
Potassium	_1610_	_J	_1330_	_J	_6640_	_J				
Selenium	_6.0_	_UJ_	6.0_	_UJ_	_6.0_	_UJ_				
Silver	_6.1_	_J	_5.3_	_UJ_	_5.3_					
Sodium	48000	_J	_13300	_J	_47100	_j				
Thallium	_0.40_	UJ	_0.40_	_UJ_	_0.40_	_UJ_				
Vanadium	_12.3_		_12.3_	ບJ	_12.3_	_UJ_				
Zinc	_3.2_	UJ	_3.2_	_ບJ_	_3.2_	_J				
Cyanide	_8.5_		_7.3_	_J	_7.8_	_J				

Analytical Results (Qualified Data) Page 2 of 5

Case #: 26593

SDG: MEBQD5

Site: Lab. : Himco Dump SILVER

Reviewer:

J. Ganz November 10, 1998

Sample Number:	MEBQD5		MEBQD6		MEBQD7		MEBQD8		MEBQD9	
Sampling Locatio	SB15-0.	5	SB15-2	*	SB15-6		SB18-0.	5	SB18-2	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	1
Date Sampled:	10/19/9	8	10/19/9	8	.10/19/9	8	10/19/9	8	10/19/9	8
<pre>\$ Solids:</pre>	86.5		93.1		89.6		88.8		92.2	ĺ
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	'
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aluminum	3470_		_2860_		8750_		4320_		_6200_	
Antimony	_9.8_	_ʊ	_9.1_	_U	_9.4_	_ʊ	_9.5_	_ʊ	_9.2_	_U ]
Arsenic	_6.0_	_J	_4.4_	_J	_7.0	_J	_1.5_	_ <sup>J</sup>	_4.8	_J
Barium	_102_		_133_		_112_		_81.1_		_89.8_	
Beryllium	_0.60_	_J	_0.50_	_J	_0.80_	_J	_0.40_	_J	_0.20_	_J
Cadmium	_1.1_		_1.2_		_2.0_		_1.0_	_U	_1.2_	
Calcium	_16400		_26800		_31700		_4230_		_13000	
Chromium	_12.9_		_14.0_		_17.9_		_10.5_		_19.8_	\
Cobalt	_5.1_	_J	_5.0_	_J	_10.8_		_4.5_	_J	_5.9_	_J
Copper	_113_		_283_		_2220_		_41.7_		_25.6_	
Iron	_26000		_19400		_13500		_8960_		_15000	
Lead	_695_	_J	_287_		_231_	_J	_67.4_		_83.4_	
Magnesium	_4810_		_5420_		_22600		_1810_		_4440_	
Manganese	_514_		_399_		_1410_		_474_		_513_	
Mercury	_0.40_		_0.50_		_0.10_	_J	_0.30_		_0.10_	_J '
Nickel	_21.0_	_J	_23.7	_J	_298_		_6.4_	U	_15.0_	_J
Potassium	_363_	_J	_385_	_J	_566_	_J	_539_	_J	_210_	_J
Selenium	_0.10_	U	_0.10_		_0.10_	_UJ_	_0.10_	_U	_0.10_	_U
Silver	_1.2_	_U	_2.0_		_1.2_	_U	_1.2_	_U	_1.2_	_U
Sodium	_65.0_	_J	_60.9	J	_184_	_J	75.7_		78.2	_J
Thallium	_0.10_		_0.08_	ַ ט	_0.09_	บ	_0.09_	U	_0.09_	
Vanadium	_11.1_	_J	_10.2_	_J	_17.1_		_11.2_	_J	_18.0_	
Zinc	_427_		_465_		_1120_		_103_		_160_	
Cyanide	_1.1_	_J	_0.90_	_J_	_4.7_		_0.50_	_J	_1.5_	_J
<del></del>					<del></del>					

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				/	/					
			Analyti	cal Re	sults (Qu	alifie	d Data)	Page	3 of 5	
Case #: 26593	SDG: ME	BQD5		/						
Site:	Himco D	nwb		/						
Lab. :	SILVER			•/						
Reviewer:	J. Ganz									
Date:	Novembe	r 10, 3	1998	$\leq$						
Sample Number:	MEBQEO		MEBQE1	<u> </u>	MEBQE2		MEBQE3		MEBQE4	<del></del> <del>-</del>
Sample Number: Sampling Locatio	SB18-6		SB15-0:	_ /	SB05-2		SB04-0.5	=	SB04-2	1
Matrix:	Soil	(	Soil	~ <i>/</i>	Soil		Soil	,	Soil	i 1
Units:	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	l l
Date Sampled:	10/19/9	_ \	10/19/9		10/19/9	g	10/19/98	<b>a</b>	10/19/9	a i
% Solids:	79.8	•	94.8	0	96.0	· ·	93.4	•	93.7	,
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	l
Dilucion Factor:	1.0		1.0		1.0		1.0		1.0	i
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aluminum	5540		2580_		3070_		_3340_		_5130_	! 
Antimony	10.6	U	_8.9_	_U_	_8.8_		_9.0_	_บ_	9.0	_U
Arsenic	_3.4_		1.2		0.60_	_J	_1.0_		_1.1_	_J
Barium	130		44.7		34.5		21.2		_39.5_	~
Beryllium	_0.30_	_J	_0.20_		_0.30_	_J_	_0.10_	_J	_0.20_	_J
Cadmium	_1.2_		1.1		1.0		1.0		1.0	ַט
Calcium	14300				_4180_		_1020_		_1530_	
Chromium	11.1		7.0		_8.3_		_4.8_		_6.4_	
Cobalt	_5.7_	J	_3.2_	J	_3.1_	_J_	_1.7_		_1.7_	Ū
Copper	36.0		_16.4_		_17.1_		_3.8_		_3.3_	_J
Iron			4590		4360		4120		_5070_	
Lead	_88.9_		_56.9_		_22.3_		_8.1	_J	_7.8_	_J
Magnesium	_3470_		2390		_2050 <u>_</u>		r_724_		_833_	
Manganese	_312_		_109_		_66.4_		69.9_		_86.2_	
Mercury	_0.09_	_J	_0.08_	_J	_0.06_	_J	_0.05_	_ʊ	_0.05_	U
Nickel	_9.4_	_J	_6.2_	_J	_12.3_	_J	_6.1_	_v	_6.0_	_U
Potassium	_328_	_J	_195_	_U	_419_	_J	_198_	_u	_288_	_J
Selenium	_0.20_	_n	_0.10_	_ʊ	_0.10_	_U	_0.10_	_U	_0.10_	U
Silver	_1.3_	_U	_1.1_	_ʊ	_1.1_	_U	_1.1_	_u	_1.1_	U
Sodium	_87.1_	_J	_50.2_	_J	_50.6_	_J	_34.5_	_J	_525_	
Thallium	_0.10_	_U	_0.08_	_U	_0.08_	_U	_0.08_	_u	_0.08_	U
Vanadium	_16.1_		,_8.3_	_J	_9.2_	_J	_7.0_	_J	_9.4_	_J
Zinc	_182_		_72.9_		_52.4_		_15.6_		_17.3_	
Cyanide	_0.40_	_ <sup>J</sup>	_0.30_	_J	_0.20_	_J	_0.10_	_u	_0.10_	_J
	_									

Analytical Results (Qualified Data) Page 4 of 5

MEBQF4

Case #: 26593 Site:

Sample Number:

SDG: MEBQD5 Himco Dump SILVER J. Ganz

Lab. : Reviewer:

MEBQE5

Date:	November	10,	1998

Sampling Locatio	SB04-6		SB06-0.	5	SB06-10	•	SB06-2		UNREADA	BLE
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Date Sampled:	10/19/9	8	10/19/9	8	10/19/9	8	10/19/9	8	10/20/9	8
% Solids:	81.6		90.0		90.2		93.8		89.5	
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aluminum	3340		4220		3000_	· —	_2770_		3900	
Antimony	10.3	ט	_9.4_	U_	_9.4_		_9.0_		_9.4_	_U_
Arsenic	_0.60_	_J	_2.1_	_J	_1.4_	_J	_1.1_			_J
Barium	_18.7_		_51.8_		_47.7_		_40.4_		_65.8_	
Beryllium	_0.10_	_U_	_0.10_	_ט_	_0.10_		_0.30_	J	_0.30_	_J
Cadmium	_1.1_	_U_	_1.0_	U	_1.0_	U	_1.0_	_ʊ	_1.2_	
Calcium	_2070_		_1750_		_1660_		_728_		_9970_	
Chromium	_5.1_		_4.5_		_5.5_		_4.6_		_8.5_	
Cobalt	_1.9_	_U	_3.3_	_J	_1.9_	_J	_2.8_	_J	_3.2_	_J
Copper	3.1_	_J	_20.4_		_19.9_		_22.6_		_18.9_	
Iron	_2570_		_6200_		_4800_		_3660_		_5970_	
Lead	_6.2_	_J	_13.4_	_J	_17.2_	_J	_9.4_	_J	_167_	
Magnesium	_346_		_746_		_598_		_470_		1550	
Manganese	_58.1_		_337_		_296_		_227_		_326	
Mercury	_0.06_	_U	_0.06_	_บ	_0.06_		_0.05_	_ʊ	_0.10_	_J
Nickel	_6.9_	_U	_9.6_	_J	7.0_	_J	_6.0_	_ʊ	_8.8_	_J
Potassium	_227_	_U	_219_	_J	_205_	_U	_227_	_J	_423_	_J
Selenium	_0.10_	_u_	_0.10_	_ʊ	_0.10_	_ʊ	_0.10_	_U	_0.10_	_u
Silver	_1.3_	_u	_1.2_	_U	_1.2_	_U	_1.1_	_U	_1.2_	_U
Sodium	_110_	_J	_24.8_	_J	_18.1_	_U	_32.6_	_J_	_48.6_	_ <sup>J</sup>
Thallium	_0.10_	_U	_0.09_	_ʊ	_0.09_	U	_0.08_	_u	_0.09_	_U
Vanadium	_3.7_	_J	_8.5_	_J	_7.0_	_J	_5.2_	_J	_8.5_	_J
Zinc	_10.0_		_52.3_		_45.0_		_41.0_		_109_	
Cyanide	_0.20_	_J	_0.30_	_J	_0.10_	_U	_0.10_		_0.50_	_J

MEBQE6 MEBQE7

Analytical Results (Qualified Data) Page 5 of 5

Case #: 26593 SDG: MEBQD5
Site: Himco Dump
Lab.: SILVER
Reviewer: J. Ganz

Date: November 10, 1998

Sample Number: Sampling Locatio Matrix: Units: Date Sampled: \$ Solids: Dilution Factor:	MEBQG5 UNREADA Soil mg/kg 10/20/9 92.2		MEBQG6 UNREADA Soil mg/kg 10/20/9 92.3 1.0							
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aluminum	3980		3220_			<del></del>				
Antimony	_9.2_	U	_9.1_	_U	· · · · · · · · · · · · · · · · · · ·	<del></del>				i
Arsenic	0.90		_0.90_	_J	<del></del>			<del></del>		
Barium	35.7		_33.6_							
Beryllium	_0.20_	J	_0.30_	J						
Cadmium	_1.3_		1.0	_ט						
Calcium	_9300_		12000							
Chromium	_14.2_		_12.9_							
Cobalt	_3.9_	_J	_3.3_	_J						
Copper	_14.4_		_17.0_							
Iron	_9180_		_11300							
Lead	_58.7_		_45.6_	_J						
Magnesium	_3060_		_3000_							
Manganese	_203_		_220_							
Mercury	_0.08_	_J	_0.10_	_J						1
Nickel	_12.0_	_J	_15.4_	_J						
Potassium	_310_	_J	_279_	_J						
Selenium	_0.10_	_UJ_	_0.10_	_ʊ						
Silver	_1.1_	U	_1.1_	_u						
Sodium	_54.7_	_J	_74.3_	_J						
Thallium	_0.09_	Ŭ	_0.09_	_u						
Vanadium	_9.B_	_J	_6.0_	_J	<del></del>					
Zinc	_175_		_90.9_							
Cyanide	_0.30_	_J	_0.90_	_ <sup>J</sup>						

FORM #		FORM 1	FORM 1	FORM 3	FORM 3	FORM 3	FORM 4	FORM 5	FORM 6	FORM 7	PORM 7	FORM F	FORM 9	FORM 4	FORM 5	PIELD	PELD	PELD	FELD	ļ	<del> </del>
ELEMENT	HOLD TIME	CALID	CONT1 N 3 CALIB	CALIB BLANK	PREP WATER BLANK	PREP SOU, BLANK	ICS S-R	SOIL SPIKE #R	SOIL BUP RPD	LCII AQ	sog.	PERIOR TOURS	SERIAL DULUTION SOIL	AQ DUP RPD	AQ SPIKE BR	BLANK	DUP RPD	BLANK	DUP RPD	GFAA DUP	CVAA ANAL OMKS
ALUMINUM				32.3	26.22																
ANTIMONY			- :													,					
ARSENIC								30.6								, , , , , , , , , , , , , , , , , , ,					
BARTUM			•																		
BERYLLNM				1.1		0./5													_		
CADMIUM																					
CALCIUM															·						
CHROMIUM																					
COBALT				8.8						-											
COPPER				-5.3																	
TRON																					
LEAD																					
MAGNESTUM										<u>:</u>											
MANGANESE				2.9																	
MERCURT				0.1																	
MICKEL				29.6																	
POTABBIUM				1006																	
BELENIUM															38.6						
EU.VER																					<u> </u>
MUTGO																					
TRALLIUM						]															
אמז																					
VANADIUM				13.9																	
TOMC.				5.1																	
YANDE A	7				8.454	0,498				<u> </u>							<u> </u>		· `.		

- - • • •

#### SILVER

\*\*\*\*\*CASE NARRATIVE

CASE: 26593 SDG: MEBQD5

SILVER RECEIVED SOIL AND WATER SAMPLES FOR METALS AND CYANIDE.

COOLER TEMPERATURES:

AIRBILL NUMBER: 7642848861 3° 7222748260 4° 7222748256 4° 7642849211 4° 1172422112 4°

NOTE pH ON HN03 PRESERVED BOTTLES:

 MEBQE8
 pH
 3

 MEBQE9
 pH
 3

 MEBQF0
 pH
 3

AS PER DISCUSSION WITH CHARLES HUTCHINSON (REFERENCE TELEPHONE LOG) SILVER PROCEEDED WITH ANALYSIS.

DISK TO DYNCORP AND REGION 5.

MELBA BENCICH

DOCUMENT CONTROL OFFICER

# Regional Transmittal Form

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE: 11/23/98
SUBJECT: Review of Data Received for Review on
FROM: Stephen L. Ostrodka, Chief (HSRL-5J) / L F. Superfund Technical Support Section / L F.
TO: Data User: USACE
We have reviewed the data for the following case:
SITE NAME: Hinco Dump (IN)
case number: 3655/ sdg number: MEBQC/
Number and Type of Samples: 14 (Sail) with
Sample Numbers: MEBOCI-9 MEBODO-4
Laboratory: <u>Oatachem</u> Hrs. for Review: <u>9.5hrc</u>
Following are our findings:
all data are usable with the qualifications
described in the attached varrative.
L FINKelbere
11-23-98
/

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	November 18, 1998	·
	Review of Data Received for Review on <u>November</u>	16, 1998
FROM:	Stephen L. Ostrodka, Chief (SRT-4J Superfund Technical Support Section	
TO:	Data User: <u>USACE</u>	
	eviewed the data by CADRE for the f	_
CASE NUMB	ER: <u>26551</u>	SDG NUMBER: MEBOC1
Number and	d Type of Samples: 14 (soil)	
Sample Nu	mbers: MEBQC1-9 MEBQD0-4	
Laborator	y: Datachem	_ Hrs. for Review:
Following	are our findings:	•

CC: Cecilia Moore
Region 5 TPO

Mail Code: SM-5J

Case Number: 26551 SDG Number: MEBQC1 Site Name: Himco Dump (IN) Laboratory: Datachem

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

14 soil samples, numbered MEBQC1-9 MEBQD0-4, were collected on 10/12 and 10/15/98. The lab received the samples on 10/13 and 10/17/98 in good condition. All samples were analyzed for metals and cyanide. All samples were analyzed using CLP SOW ILM04.0 analysis procedure.

Mercury analysis was performed using a Cold Vapor AA Technique. Cyanide analysis was performed using MIDI Distillation procedure. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectrometric procedure.

Case Number: 26551

SDG Number: MEBQC1 Laboratory: Datachem Site Name: Himco Dump (IN)

#### 1. HOLDING TIME:

HOLDING TIME CRITERIA

Inorganic

	Holdin	ng Time		pH			
	Primary	Expanded	Primary	Expanded			
Metals	180	0	2.0	0.0			
Mercury	28	0	2.0	0.0			
Cyanide	14	0	12.0	0.0			

DC-280: The following inorganic soil samples were reviewed for holding time violations using criteria developed for water samples.

> MEBQC1, MEBQC2, MEBQC3, MEBQC4, MEBQC5, MEBQC6, MEBQC7, MEBQC8 MEBQC9, MEBQD0, MEBQD1, MEBQD2, MEBQD3, MEBQD4

#### 2. CALIBRATIONS:

CALIBRATION CRITERIA

\_\_\_\_\_\_

Inorganic

Percent Recovery Limits

	Prin	nary '	' Expar	nded
	Low	High	Low	High
Cyanide	85.00	115.00	70.00	130.00
ICP	90.00	110.00	75.00	125.00
Mercury	80.00	120.00	65.00	135.00

No problems were found for this qualification.

Reviewed By: <u>T.Balikji-Shammo</u>

Date: <u>November 18, 1998</u>

Case Number: 26551 SDG Number: MEBQC1 Site Name: Himco Dump (IN) Laboratory: Datachem



# LABORATORY BLANKS CRITERIA

DC-283: The following inorganic samples are associated with a blank analyte with negative concentration whose absolute value is greater than the instrument detection limit (IDL). The sample concentration is also greater than the IDL and less than five times the absolute value of the blank. Hits are flagged "J". Some non-detect reading are sufficiently high that the detection limit may be elevated. These non-detect are flagged "UJ".

Beryllium

MEBQC4, MEBQC5, MEBQD3, MEBQD4

Chromium

MEBQC1, MEBQC2

DC-284: The following inorganic samples are associated with a blank concentration which is greater than the instrument detection limit (IDL). The sample concentration is also greater than the IDL and less than five times the blank concentration. Hits are qualified "J"; non-detects are acceptable.

Chromium

MEBQC1, MEBQC2, MEBQC6, MEBQC9, MEBQD1, MEBQD3,

Cobalt

MEBQC3, MEBQC4, MEBQC5, MEBQC6, MEBQC7, MEBQC8, MEBQD0, MEBQD1 MEBQD2, MEBQD3

Copper

MEBQC2

Potassium

MEBQC1, MEBQC3, MEBQC4, MEBQC5, MEBQC6, MEBQC7, MEBQC8 MEBQD0, MEBQD1, MEBQD2, MEBQD3, MEBQD4

Selenium

MEBQC1, MEBQC2, MEBQC3, MEBQC4, MEBQC5, MEBQC6, MEBQC7, MEBQC9 MEBQD0, MEBQD1, MEBQD2, MEBQD3, MEBQD4

Reviewed By: \_\_\_T.Balikji-Shammo\_

Date: November 18, 1998

Case Number: 26551

SDG Number: MEBQC1 Site Name: Himco Dump (IN) Laboratory: Datachem

Sodium

MEBQC1, MEBQC2, MEBQC6, MEBQC9, MEBQD1

Vanadium MEBQC2

Cyanide

MEBQC1, MEBQC2, MEBQC6, MEBQC8, MEBQC9, MEBQD1, MEBQD2, MEBQD4

DC-338: During review of the following inorganic samples, the reported IDL/default CRDL value was used for cyanide.

> MEBQC1, MEBQC2, MEBQC3, MEBQC4, MEBQC5, MEBQC6, MEBQC7, MEBQC MEBQC9, MEBQD0, MEBQD1, MEBQD2, MEBQD3, MEBQD4

#### 4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

MATRIX SPIKE CRITERIA

Inorganic

Percent Recovery Limits

\_\_\_\_\_\_ 125.0 Upper 75.0 Lower

Extreme lower 30.0

DC-268: The following inorganic samples are associated with a matrix spike recovery which is low (30-74 %) indicating that sample results may be biased low.

Hits are qualified "J" and non-detects are qualified "UJ".

Antimony ·

MEBQC1, MEBQC2, MEBQC3, MEBQC4, MEBQC5, MEBQC6, MEBQC7, MEBQC MEBQC9, MEBQD0, MEBQD1, MEBQD2, MEBQD3, MEBQD4

Reviewed By: \_\_\_T.Balikji-Shammo

Date: <u>November 18, 1998</u>

Case Number: 26551 SDG Number: MEBQC1 Site Name: Himco Dump (IN) Laboratory: Datachem



No problems were found for the lab control sample.

#### 5. LABORATORY AND FIELD DUPLICATE

No problems were found for this qualification.

#### 6. ICP ANALYSIS

DC-294: The analyte concentration is high (>50 X the IDL) and serial dilution percent difference is not in control (>10%). All associated data are qualified "J".

#### Calcium

MEBQC1, MEBQC2, MEBQC3, MEBQC4, MEBQC5, MEBQC6, MEBQC7, MEBQC8 MEBQC9, MEBQD0, MEBQD1, MEBQD2, MEBQD3, MEBQD4

#### Magnesium

MEBQC1, MEBQC2, MEBQC3, MEBQC4, MEBQC5, MEBQC6, MEBQC7, MEBQC8 MEBQC9, MEBQD0, MEBQD1, MEBQD2, MEBQD3, MEBQD4



# GFAA ANALYSIS

No GFAA analysis was performed.

#### 8. SAMPLE RESULTS

All data, except those qualified above, are acceptable.

Reviewed By: <u>T.Balikji-Shammo</u>

Date: November 18, 1998

# CADRE Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The anlayte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The data are unusable. (The compound may or may not b present)

F	ILE NAME: MEBQC1 DATE:	11/11/98 TIME: 16:22	
	RITERIA FILE: FGDR194		
1		DATA	
1	Original	X  Qualified	
-	QUALIFI	CATIONS PERFORMED	
X X X	Quantitation Limit Percent Moisture Holding Time Calibrations Matrix Spikes IPC Internal Standards SMC/Surrogates System Performance Sample Cleanup	X CRDL Standards X ICS X LCS X Duplicates X Furnace AA QC X ICP Serial Dilutions X Sample Results Verificat X Laboratory Blanks Field QC	tion
	PRI	NT NON-DETECTS	
x l	Yes	No	
-	PRINT	REJECTED RESULTS	
اجر	Yes	No	

SDG: MEBOC1

Site: Lab. : Himco Dump (IN)

Datachem

Reviewer: Date:

T.Balikji-Shammo

November 18, 1998

Sample Number: MEBQC1 MEBQC3 MEBQC2 MEBQC4 MEBOC5 Sampling Location: SB03-05 SB03-2 SB20-05 SB20-2 SB20-6 Matrix: Soil Soil Soil Soil Soil Units: mq/kq mg/kg mg/kg mg/kg ma/ka Date Sampled: 10/12/98 10/12/98 10/15/98 10/15/98 10/15/98 % Solids: 89.2 90.8 91.9 92.5 93.7 Dilution Factor: 1.0 1.0 1.0 1.0 1.0 ANALYTE Result Flag Flag Result Flag Result Result Result Flag Flag \_3950 Aluminum 4080 3960 \_4870\_ \_3420\_ \_ 11.5\_ Antimony \_UJ\_ \_11.1\_ \_11.3\_ \_UJ\_ \_UJ\_ \_11.1\_ \_UJ\_ \_10.9\_ \_UJ\_ Arsenic \_1.3\_ \_1.6\_ \_5.8\_ \_10.8\_ \_8.1\_ 27.9 \_21.9 Barium \_172\_ 72.2 \_201\_ Beryllium U \_0.20 0.20 \_0.20\_ \_U\_ \_U\_ \_0.70\_ \_<sup>J</sup>\_ \_0.70 J \_บ Cadmium \_1.0 1.0 \_1.0\_ \_1.1\_ \_U\_ \_0.90 U \_69200 \_J<sup>¯</sup> Calcium 1670 \_480\_ \_J\_ \_24900 \_J\_ \_28700 \_J\_\_\_ \_J Chromium \_5.2\_ \_5.3\_ \_J \_25.1\_ \_14.0\_ \_11.1\_ Cobalt \_3.4\_ \_U\_ \_3.4\_ \_U\_ \_4.9\_ \_5.4\_ \_6.0\_ \_15.9\_ Copper \_4.3 \_242 \_664 \_54.4 \_3450\_ \_2530 \_20600 Iron \_11500 \_8700 Lead \_9.8\_ \_161 \_238 \_11.7\_ \_105 \_333 \_733<u>0</u>\_ \_697\_ Magnesium \_J\_ 9940 \_8990 \_58.7 \_14.8 Manganese \_592 \_454\_ \_200\_ \_ט Mercury \_0.06\_ \_U\_ \_0.06\_ \_27.9\_ \_4.5 \_1.2 Nickel 8.4\_ \_U\_ \_8.2\_ \_U\_ \_16.5\_ \_22.3 \_11.0\_ Potassium 253 \_J\_ \_127\_ U \_404\_ \_483\_ \_339\_ Selenium \_0.80\_ \_0.90\_ \_0.60\_ \_J\_ \_J\_ \_1.3\_ \_0.70\_ Silver \_0.90\_ \_U\_ \_0.90\_ \_U \_1.9\_ \_3.1\_ \_1.1\_ Sodium \_39.0\_ 20.4 J \_J\_ \_105\_ \_184\_ \_92.5\_ Thallium 0.40\_ \_ʊ\_ \_0.40\_ \_U\_ \_0.40\_ \_u\_ \_0.50\_ \_0.40\_ \_U\_ \_7.8\_ \_5.7\_ Vanadium \_12.8\_ \_15.8\_ \_12.9\_ Zinc 26.0\_ \_14.4\_ \_324\_ \_537\_ \_121\_ \_0.05\_ Cyanide \_0.20\_ \_3.3\_ \_4.3\_ \_1.2\_

Page \_1\_ of

\_3\_

Tase #: 26551 ite:

SDG: MEBQC1

Himco Dump (IN)

Lab. : Reviewer: Datachem T.Balikji-Shammo

Date:

November 18, 1998

Sample Number: Sampling Location: Matrix: Units: Date Sampled: % Solids: Dilution Factor:	MEBQC6 SB19-05 Soil mg/kg 10/15/98 91.4 1.0		MEBQC7 SB19-2 Soil mg/kg 10/15/98 89.8 1.0	В	MEBQC8 SB19-6 Soil mg/kg 10/15/98 74.4 1.0	B	MEBQC9 SB17-05 Soil mg/kg 10/15/99 92.7 1.0	8	MEBQDO SB17-2 Soil mg/kg 10/15/98 94.2 1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium Zinc Cyanide	4120 11.2 3.4 53.5 0.20 1.0 5070 6.9 50.6 6700 49.8 2050 373 0.06 13.5 210 1.0 0.90 36.2 0.40 10.1 81.6 0.10			U	_5210					



Case #: 26551

SDG: MEBQC1

Site:

Himco Dump (IN)

Lab. :

Datachem

Reviewer: Date: T.Balikji-Shammo November 18, 1998

									. ———		_
Sample Number:	MEBQD1		MEBQD2		MEBQD3		MEBQD4		1		
Sampling Location:	SB16-05		SB16-2		SB16-6		SB16-60				-
Matrix:	Soil		Soil		Soil		Soil				1
Units:	mg/kg		mg/kg		mg/kg		mg/kg				
Date Sampled:	10/15/9	В	10/15/9	8	10/15/9	8	10/15/9	8			l
% Solids:	95.6		95.7		79.9		76.9		1		
Dilution Factor:	1.0		1.0		1.0		1.0		1		!
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	
Aluminum	3340		4600		_4820_		8860_				1
Antimony	_10.7_	บับ	10.7	บJ	12.8	UJ	13.3	UJ			ĺ
Arsenic	_3.9_		3.8		_4.7_		_5.5_				i
Barium	32.5		_55.5_		54.3		_95.7_		<del></del>		į
Beryllium	_0.20_	U_	_0.20_	<u>"</u>	0.80	_J_	_0.90_	_J			İ
Cadmium	_0.90_		_0.90_	u	1.1_		_1.1_				İ
Calcium	_14000_	J	_14800	_J	41200	_J	85900	_J	<del></del>		Ĺ
Chromium	_7.9_	_J	_9.6_		_13.1_	_J	_11.3_				Ì
Cobalt	_4.8_	_J	4.3	_J_	_3.8_	_J	_4.0_				ĺ
Copper	_16.4_		_49.0_		_18.3_		_18.9_				
Iron	_8530_		_7460_		10800		_16600				1
Lead	_17.6_		_32.2_		_28.2_		_26.6_				
Magnesium	_4860_	J	_3530_	_J	5460_	_J	_7860_	_J			1
Manganese	_298_		_294_		_228_		_588_				1
Mercury	_0.05_	_U	_0.05_	U	_0.06_	_U	_0.06_	U			
Nickel	_10.8_		_8.8_		_11.8_		_12.1_				-
Potassium	_289_	_J	_318_	_J	_283_	_J	_450_	_J			
Selenium	_0.60_	_J	_0.70_	_J	_1.4_	_J	_1.3_	_J			
Silver	_0.80_	_u	_0.80_	_U	_1.0_	_U	_1.1_	_ʊ			
Sodium	_29.8_	_J	_78.0_		_219_		_378_				-
Thallium	_0.40_	U	_0.50_		_0.50_	_U	_0.50_				
Vanadium	_9.9_		_11.9_		_14.4_		_15.1_				
Zinc	_66.5 <u>_</u>		_109_		_78.0_		_78.6_				-
Cyanide	_0.10_	_J	_0.08_	_J	_1.0_		_0.50_				1

#### DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature utinized in this document, the following code letters and associated definitions are provide:

- U Indicates the material was analyzed, but was not detected above the level of the associated value.

  The associated value is either the sample quantitation limit or the sample detection limit.
- J Indicates the associated value is an estimated quantity.
- R Indicates the data are unusable. (Note: The analyte may or may not be present.)
- UI Indicates the material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
- Indicates the reported value is estimated because of the presence of interferences. An explanatory note shall be included under Comments on the Cover Page (if the problem applies to all samples) or on the specific FORM I-IN (if it is an isolated problem).
- M Indicates duplicate injection precision is not met.
- N Indictaes the spike sample recovery is not within control limits.
- S Indicates the reported value was determined by the Method of Standard Addition (MSA).
- W Indicates the post-digestion spike for furnace AA analysis is out of control limits (85%-115%), while sample absorbance is less than 50% of the spike absorbance.
- + Indicates the correlation coefficient for the MSA is less than 0.995.
- Indicates the duplicate analysis is not within control limits.
- Note: Entering "S", "W" or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

. ESAT-5-087.1

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# QC EXCEPTION SUMMARY REPORT

CASE\BASI: 26551	BITE: Itimoco Dump(IN) MATRIX: Soil	WATER SAMPLE SPKI
DATA SET:	LABI Datachem CONCI	WATER SAMPLE DUP:
LAB QC #	REVIEWED BY: Bria Balikii Shammo	SOIL SAMPLE SPK1
DATE: 11-18-98		SOIL SAMPLE DUP:

TOIM I	<u> </u>	FORM 3	70RM 3	FORM )	FORM 3	FORM 3	FORM 4	PORMS	FORM 4	FORM 7	FORM 7	PORM 9	FORM 9	FORM &	70MJ	7121.0	PELD	FIRLD	FIELD	1	
BLANNIT	HOLD TOKE	PATEAL CALIS	CONTI N CONTI	CALIB BLANK	PREP WATER BLANK	PERP BOIL BLANK	ici Nii	SOU, SPIKE MR	DOEL DUP RPD	LCT AQ	LCI BOB,	AERIAL DELUTION ACCIONI	BERIAL DELVITION SOC	YUU QA UTH	AU SPIKS .	DI:ANE	DUP arn	BLANE	DUP RPD	CFAA DA/P	CYAA AMULT BMXX
ALUMINUM				121.3																	
ANTIMONY								44.3													
At 10													100.00								
BARRIM				2.8																	
DERTLENM				-1.2																	
CADMIUM									200.0												
CALCTUM				109.0							·		12.9								
Сивомим				7.6									44.9								
COPALY					3.597				200.0												
COPPER		·		5.4	·				41.40				43.2								
INON				54.4																	
LEAD																					
MAGNESRIM				130.2									18.3								
MANGAMESE				3.7																	
MERCURY																					
MCERL																					
MARIATON		·		351.8					41.1				100.0								
IFLENTUM .				2.4									100.0		·						
IL YER																					
нило				13.4					·												
HALLRIM																					
DH .																					
ANADRIM				5.1									17.2								
D+C				0.7									38.5								
TANDE			اد	1.121	_   7	0.121	ĺ	1	İ	1	-		1		{	{	{	[		1	

TP 11-25-95



# ADMINISTRATIVE CASE NARRATIVE

Contract:

68-D5-0017

Case:

26551

SDG:

MEBQC1

# **Miscellaneous Comments:**

The following cooler arrived at DCL on 10/13/98. No problems were noted:

Cooler No. C98-1121 arrived at 6°C.

The following cooler arrived at DCL on 10/17/98. No problems were noted:

Cooler No. C98-1161 arrived at 8°C.

Joseph Jun



#### CASE NARRATIVE

NOV 1 6 1998

Case #: 26551 SDG #: MEBQC1

DCL Set ID #: 98C-0242, 98C-0245

November 9, 1998

#### General Information

The samples in this SDG were analyzed by methodologies contained in ILM04.0 under contract 68-D5-0133. All concentration, analytical, and method qualifiers are defined in the SOW.

## **Holding Times**

All samples were prepared and analyzed within method-required holding times.

## Initial and Continuing Calibration

All initial and continuing calibration verification and blank analyses were performed within the designated frequency and recoveries of the verifications and concentrations of the blanks met method acceptance criteria.

#### Preparation Blanks

The absolute value of all analyte concentrations in the preparation blank were lower than the Contract Required Detection Limit.

#### ICP Interference Check Sample Analysis

Results for the interference check samples met method acceptance criteria.

#### Matrix Spike Analysis

All matrix spike recoveries were within the limits of 75-125% with the exception of the Sb recovery. A post digestion spike was performed for Sb. Since all LCS recoveries met method criteria, this poor spike recoveries may be attributed to matrix interference.

### Matrix Duplicate Analysis

All matrix duplicate results met method acceptance criteria with the exception of Cd.

#### Laboratory Control Sample Analysis

Results for the analyses of the solid LCS met method acceptance criteria.

#### ICP Serial Dilution Analysis

All ICP Serial Dilution results met method acceptance criteria with the exception of Ca and Mg. The reported values for these analytes on Form 1 are therefore estimated because of the presence of interferences.

#### Miscellaneous Comments

None.

Neil Edwards

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# Semivolatile Analysis Data - ECMQ3 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMMO

CAS JMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION
	UNKNOWN	4.19	6.000
	PROPENE TRICHLORO ISOMER	4.57	5.000
	UNKNOWN	4.64	25.000
	PROPENE TRICHLORO ISOMER	5.15	5.000
	UNKNOWN	5.44	7.000
	UNKNOWN	5.51	3.000
	UNKNOWN .	5.79	2.000
	UNKNOWN -	5.89	24.000
	PROPENE TRICHLORO ISOMER	5.97	100.000
	UNKNOWN	10.82	4.000
	UNKNOWN ACID	21.23	3.000

ASE NO: DG NO:	Tentatively Identified Compo 26593 ECMMO	LABORATORY: IEA-NJ		
CAS UMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	C
	UNKNOWN	4.03	2.000	
	UNKNOWN	4.34	3.000	
	UNKNOWN	4.63	6.000	
	UNKNOWN	7.55	2.000	
	UNKNOWN	8.05	3.000	
3	UNKNOWN	11.53	8.000	
:	2(3H)-BENZOTHIAZOLONE	13.62	15.000	
	PENTOBARBITAL	14.21	3.000	
	UNKNOWN	15.92	7.000	
-	PHENOBARBITAL	16.33	8.000	
	BICYCLO[2.2.1] HEPT-5-ENE-2,3-DICARB	16.45	47.000	
	UNKNOWN KETONE	18.51	7.000	
	UNKNOWN	19.86	3.000	
	UNKNOWN	20.47	3.000	

	Semivolatile Analysis Data - SE Tentatively Identified Compo			
CASE NO:		_ABORATORY: IEA-NJ		
CAS NUMBER	COMPOUND · NAME	RT	ESTIMATED CONCENTRATION	Q
	PROPENE, TRICHLORO ISOMER	5.93	2.000	
FILE NAME:	: ECMMO.SDG DATE: 11/19/98 TIME: 09:47 CADRE98		PAGE	: 12

## Semivolatile Analysis Data - ECMQO Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMMO LABORATORY: IEA-NJ

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION
	PROPENE TRICHLORO ISOMER	4.56	3.000
	UNKNOWN	4.64	8.000
	PROPENE TRICHLORO ISOMER	5.15	3.000
	UNKNOWN	5.83	4.000
	PROPENE TRICHLORO ISOMER	5.97	55.000
	UNKNOWN	7.55	7.000
	PHENOL, P-TERT-BUTYL-	9.49	2.000
	UNKNOWN	11.64	3.000
	2(3H)-BENZOTHIAZOLONE	13.67	64.000
	UNKNOWN	16.43	2.000
	UNKNOWN	20.70	2.000
	UNKNOWN	21.23	4.000
TIE NAME	: ECMMO.SDG DATE: 11/19/98 TIME: 09:47 CADRE98		PAGE:

Semivolatile Analysis Data - ECMQ2 Tentatively Identified Compounds

CASE NO: 26593

CAS IUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	3.98	130.000	
	UNKNOWN	4.11	130.000	
	UNKNOWN	4.25	1000.000	
	UNKNOWN	4.52	190.000	
	PROPENE TRICHLORO ISOMER	4.57	25.000	
	UNKNOWN KETONE	4.63	31.000	
	UNKNOWN ALCOHOL	4.70	27.000	
	UNKNOWN	4.79	21.000	
•	UNKNOWN	4.85	10.000	
	UNKNOWN	5.00	12.000	
	PROPENE TRICHLORO ISOMER	5.15	13.000	
	UNKNOWN	5.20	37.000	
	UNKNOWN AROMATIC	5.44	15.000	
	UNKNOWN	5.79	8.000	
	UNKNOWN	5.83	6.000	
	UNKNOWN	5.88	16.000	
	PROPENE TRICHLORO ISOMER	5.97	50.000	
	UNKNOWN	6.12	1300.000	
	UNKNOWN	6.31	60.000	
	UNKNOWN ALCOHOL	6.84	20.000	
	CYCLOPENTASILOXANE, DECAMETHYL-	7.56	320.000	
	UNKNOWN	7.70	12.000	
	CYCLOHEXASILOXANE, DODECAMETHYL-	9.30	26.000	
	UNKNOWN	9.43	16.000	
	UNKNOWN	10.70	46.000	
	UNKNOWN	11.06	6.000	
	UNKNOWN	12.08	9.000	
	UNKNOWN	20.48	17.000	
	UNKNOWN	20.80	55.000	
	UNKNOWN	21.28	16.000	

Semivolatile Analysis Data - ECMM2 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMMO

CAS JUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	PROPENE TRICHLORO ISOMER	4.57	3.000	
	ALDOL CONDENSATION PRODUCT	4.64	7.000	
	PROPENE TRICHLORO ISOMER	5.14	4.000	
	UNKNOWN ALCOHOL	5.43	3.000	
	UNKNOWN	5.89	20.000	
	PROPENE TRICHLORO ISOMER	5.98	70,000	

CASE NO:	Semivolatile Analysis Data - Tentatively Identified Comp 26593 ECMMO			
CAS IUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	-
	UNKNOWN	3.97	69,000	_
	UNKNOWN	4.25	750.000	
	UNKNOWN	4.80	12.000	
	UNKNOWN	4.91	6.000	
	UNKNOWN	5.20	17,000	
	UNKNOWN	5.44	10.000	
	PROPENE TRICHLORO ISOMER	5.97	6.000	
	UNKNOWN	6.13	1200.000	
	UNKNOWN	6.31	53.000	
	UNKNOWN ALCOHOL	6.84	14.000	
	UNKNOWN	7.35	14.000	
	UNKNOWN	7.56	300.000	
	UNKNOWN KETONE	7.68	13.000	
	UNKNOWN	8.77	8.000	
	UNKNOWN	9.01	7.000	
	UNKNOHN	9.30	15.000	
	UNKNOWN	9.41	7.000	
	UNKNOWN	10.68	66.000	
	UNKNOWN	11.06	7.000	
	UNKNOWN ACID	11.92	8.000	
	UNKNOWN	12.07	14.000	
	UNKNOWN KETONE	13.20	6.000	
	2(3H)-BENZOTHIAZOLONE	13.65	58.000	
	UNKNOWN	17.58	6.000	
	UNKNOWN ACID	18.55	5.000	
	UNKNOWN	20.44	10.000	
	UNKNOWN ACID	20.69 21.24	7.000 10.000	
	UNKNOWN ACID	21.24		
	- OUKHOMU KCID	21.34	4.000	

		Volatile Analysis Data - ECMM5 Tentatively Identified Compounds			
CASE NO: SDG NO:		LABORATORY:	IEA-NJ		
CAS NUMBER		COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	ETHANE, 1,1	-OXYBIS-	3.67	34.000	
FILE NAME:	: ECMMO.SDG [	DATE: 11/19/98 TIME: 09:47 CADRE98		PAGE	.: 1
		Volatile Analysis Data - ECMQO Tentatively Identified Compounds			
CASE NO:	26593	LABORATORY:	IEA-NJ		
SDG NO:	ECMM0				
CAS		COMPOUND		ESTIMATED	
NUMBER		NAME	RT	CONCENTRATION	Q

	Volatile Analysis Da Tentatively Identified			
CASE NO: SDG NO:		LABORATORY: IEA-NJ		
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	ETHANE, 1,1'-OXYBIS-	3.64	72,000	
FILE NAME:	ECMMO.SDG DATE: 11/19/98 TIME: 09:47 CADRE98		PAGE:	: 3

ETHANE, 1,1'-OXYBIS-

FILE NAME: ECMMO.SDG DATE: 11/19/98 TIME: 09:47 CADRE98

34.000

PAGE: 2

3.69

	Volatile Analysis Data - EC Tentatively Identified Compo			
CASE NO: SDG NO:		LABORATORY: IEA-NJ		
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	a
	ETHANE, 1,1'-OXYBIS-	3.66	26.000	
FILE NAME:	ECMMO.SDG DATE: 11/19/98 TIME: 09:47 CADRE98		PAGE	: 4

NUMBER NAME RT CONCENTS  UNKNOWN ACID 10.22	SDG NO:		ABORATORY: IEA-NJ		
			RT	ESTIMATED CONCENTRATION	Q
INKNOUN ACTO 10 A2		UNKNOWN ACID	10.22	3.000	
OHEROWA ACID		UNKNOWN ACID	10.42	4.000	
UNKNOWN ACID 12.54		UNKNOWN ACID	12.54	2.000	

# CADRE Data Qualifier Sheet

	·
<u>Qualifiers</u>	Data Qualifier Definitions
υ	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The anlayte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present)
Н	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

Case Number: 26593

Site Name: HIMCO DUMP (IN)

SDG Number: ECMM0

Laboratory: IEA

12. ADDITIONAL INFORMATION

None.

Reviewed By: Thomas Sedlacek Lockheed Martin ESAT

Date: <u>December 11, 1998</u>

ise Number: 26593 SDG Number: ECMM0 ite Name: HIMCO DUMP (IN) Laboratory: IEA

> 2,4,5-Trichlorophenol, 2-Chloronaphthalene, 2-Nitroaniline, Dimethylphthalate, Acenaphthylene, 2,6-Dinitrotoluene, 3-Nitroaniline, Acenaphthene, 2,4-Dinitrophenol, 4-Nitrophenol, Dibenzofuran, 2,4-Dinitrotoluene, Diethylphthalate, 4-Chlorophenyl-phenylether, Fluorene, 4-Nitroaniline, Di-n-octylphthalate, Benzo(b) fluoranthene, Benzo(k) fluoranthene Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(q,h,i) perylene

#### ECMO2

Di-n-octylphthalate, Benzo(b) fluoranthene, Benzo(k) fluoranthene Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(q,h,i) perylene,

## COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms it appears that all VOA, SVOA, and Pesticide/PCB compounds were properly identified.

#### 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following volatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

ECMM4, ECMQ4 1,1-Dichloroethane

VBLKE2

Methylene Chloride

The following semivolatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J"

ECMMO, ECMQ4, ECMR1 bis(2-Ethylhexyl)phthalate

ECMM4, ECMM5RE, ECMOO Diethylphthalate

ECMM5

Dimethylphthalate

## 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance. The GC baseline for the pesticide analysis was acceptable.

> Reviewed By: Thomas Sedlacek Lockheed Martin ESAT Date: December 11, 1998

Case Number: 26593 SDG Number: ECMM0 Site Name: HIMCO DUMP (IN) Laboratory: IEA

#### 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No problems found for this qualification.

## 7. FIELD BLANK AND FIELD DUPLICATE

According tho the chain-of-custody the following as field duplicate pair ECMQ5 and ECMQ9, ECMM5 and ECMQ0. Sample ECMQ5 was not analyzed with the data set. The lab did not report hits in any of the samples analyzed.

#### 8. INTERNAL STANDARDS

The following semivolatile samples have internal standard retention tim outside criteria. Hits are flagged "J" and non-detects are flagged UJ

#### ECMQ2RE

Pyrene, Butylbenzylphthalate, 3,3'-Dichlorobenzidine,
Benzo(a) anthracene, Chrysene, bis(2-Ethylhexyl)phthalate,
Di-n-octylphthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthe
Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene
Benzo(g,h,i)perylene

The following semivolatile samples have internal standard area counts t are outside the lower limit of primary criteria. Hits are qualified "J and non-detects are qualified "UJ".

#### ECMM5

Pyrene, Butylbenzylphthalate, 3,3'-Dichlorobenzidine, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate

#### ECMO2

Hexachlorocyclopentadiene, 2,4,6-Trichlorophenol, 2,4,5-Trichlorophenol, 2-Chloronaphthalene, 2-Nitroaniline, Dimethylphthalate, Acenaphthylene, 2,6-Dinitrotoluene, 3-Nitroaniline, Acenaphthene, 2,4-Dinitrophenol, 4-Nitropheno Dibenzofuran, 2,4-Dinitrotoluene, Diethylphthalate, 4-Chlorophenyl-phenylether, Fluorene, 4-Nitroaniline, Pyrene, Butylbenzylphthalate, 3,3'-Dichlorobenzidine, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate

The following semivolatile samples have internal standard area counts outside expanded criteria. Hits are qualified "J" and non-detects are qualified "R".

#### ECMM5

Hexachlorocyclopentadiene, 2,4,6-Trichlorophenol,

Reviewed By: Thomas Sedlacek Lockheed Martin ESAT

Date: December 11, 1998

Site Name: HIMCO DUMP (IN)

Site Name: HIMCO DUMP (IN)

SDG Number: ECMMO Laboratory: IEA

4-Chloroaniline ECMM0, ECMM0MS, ECMM0MSD, ECMM2, ECMM4, ECMM5 ECMM5RE, ECMQ0, ECMQ2, ECMQ2RE, ECMQ3, ECMQ4 SBLKH2, SBLKH6

Hexachlorobutadiene ECMM0, ECMM0MSD, ECMM4, ECMM5RE, ECMQ2RE SBLKH6

Hexachlorocyclopentadiene ECMM5RE, ECMQ2RE, SBLKH6

Di-n-butylphthalate
 ECMM2, ECMM5, ECMQ0, ECMQ2, ECMQ3, ECMQ4
 SBLKH2

#### 4. BLANKS

No problems found for this qualification.

# SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The following semivolatile samples have two or more base/neutral surrogat recoveries above the upper limit of the criteria window. Hits are biasecthigh and qualified "J" and non-detects are not flagged.

ECMM5,

The following semivolatile samples have two or more acid surrogate recoveries above the upper limit of the criteria window. Hits are biasechigh and qualified "J" and non-detects are not flagged.

ECMM5, ECMQ2

The following semivolatile samples have one base/neutral surrogate recoveries above the upper limit of the criteria window. No action need be taken.

ECMQ2

The following semivolatile samples have one acid surrogate recoveries above the upper limit of the criteria window. Because only one surrogat is out of control no action need be taken.

ECMM2, ECMM0, ECMMOMS

Reviewed B: Thomas Sedlacek Lockheed Martin ESAT

Date: December 11, 1998

Case Number: 26593 SDG Number: ECMMO

Site Name: HIMCO DUMP (IN) Laboratory: IEA

# 1. HOLDING TIME

The following preserved volatile water samples are outside primary hold time criteria. Hits are qualified "J" and non-detects are qualified "U Results are biased low.

ECMM1, ECMM3, ECMQ1

The following semivolatile water samples are outside primary extraction holding time criteria. Hits are qualified "J" and non-detects are qualified "UJ". Results are biased low.

ECMM5RE, ECMQ2RE

## 2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

No problems found for this qualification.

#### 3. CALIBRATION

The following volatile samples are associated with a continuing calibration whose corresponding initial calibration has percent relastandard deviation (%RSD) outside primary criteria. Hits are qualified "J" and non-detects are flagged "UJ".

Bromomethane, 2-Butanone
ECMM0, ECMM0MS, ECMM0MSD, ECMM1, ECMM2, ECMM3
ECMM4, ECMM5, ECMQ0, ECMQ1, ECMQ2, ECMQ3
ECMQ4, VBLKE2, VBLKE5, VBLKE7, VHBLKE2

The following volatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

- 2-Butanone ECMM2, ECMM4, VBLKE5
- 1,1,2,2-Tetrachloroethane
  ECMM0, ECMM0MS, ECMM0MSD, ECMM1, ECMM5, ECMQ0
  ECMQ1, ECMQ2, ECMQ3, ECMQ4, VBLKE2, VBLKE7
  VHBLKE2

The following semivolatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Reviewed By: Thomas Sedlacek Lockheed Martin ESAT

Date: December 11, 1998

se Number : 26593
Site Name: HIMCO DUMP (IN)

SDG Number: ECMM0 Laboratory: IEA

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Fifteen (15) water samples, numbered ECMM0 through ECMM5, ECMQ0 through ECMQ4, ECMQ5 and ECMR1, were collected on October 1, 2, 19, 20, 21 and 22, 1998. The lab received the samples on October 20, 21, 22, 23, and 24, 1998 in good condition. All samples were analyzed for the full list of volatile and semivolatile organic analytes with the exception of ECMQ1, ECMM3 and ECMM1 which are trip blanks and only analyzed for volatiles.

According tho the chain-of-custody the following as field duplicate pairs ECMQ5 and ECMQ9, ECMM5 and ECMQ0.

Reviewed By: Thomas Sedlacek Lockheed Martin ESAT

Date: December 11, 1998

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	December 11, 1998
SUBJECT:	Review of Data Received for Review on Nov. 16, 1998
FROM:	Stephen L. Ostrodka, Chief (SRT-4J) four fitwo ostwollus Superfund Technical Support Section Michael & Byrin 12/14/06
TO:	Data User: USACE
We have re	eviewed the data for the following case:
SITE NAME	: HIMCO DUMP (IN)
CASE NUMBI	ER: 26593 SDG NUMBER: ECMMO
Number and	d Type of Samples: 15 (water)
Sample Nur	mbers: ECMM0-5, ECMQ0-4,9, ECMR1
Laboratory	y: Hrs. for Review: $\sqrt{5.0 + 1}$
Following the o	are our findings: data are acceptable and mable with the reations described in the attached invitative
maly	reations described in the attached invisative
, ,	Midrael 1 Byring

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No:	CERCLIS No:/N
	Site Name Location: Hemes Dump
Contractor or EPA Lab: AENCIA	(A) Data User: USACE
No. of Samples: Date	Sampled or Data Received: 11-9-98
If no, are traffic report of poof-custody record? Yes	g lists been received? Yes Noacking list numbers written on the chain-
	100
Are basic data forms in 3 Yes No of samples claimed: 20 No	No_No_ 20 . of samples received:
Received by: Syntte	Bussel Date: 11-9-98
Received by LSSS: Aprilto	Burney Date: 1+9-98
Review started: 11-10-98	Reviewer Signature: Stoppine Tohin
Total time spent on review:	15 hrs Date review completed: 11_1(
	urnett
Mailed to user by: Lynette	Burnell Date: 12-15-98
<pre>DATA USER: Please fill in the blanks bel</pre>	ow and return this form to: t. Coordinator, Region V, 5SCRL
Data received by:	Date:
Data review received by:	Date:
Organic Data Complete [] Dioxin Data Complete [] SAS Data Complete []	Suitable for Intended Purpose [ ] / if ( Suitable for Intended Purpose [ ] / if ( Suitable for Intended Purpose [ ] / if ( Suitable for Intended Purpose [ ] / if (
PROBLEMS: Please indicate resuses.	
Received by Data Mgmt. Coordin	•

Case #: 26593

SDG: ECML0

Site:

HIMCO DUMP, ELKHART

Lab.: Reviewer: Date:

-				1						1	
	Sample Number:	ECMN4		ECMN7				!			
	Sampling Location:	SB14-0.5		SB13-0.5				!			
	Matrix:	Soil		Soil				ļ		ļ <del></del>	
	Units:	ug/kg		ug/kg		!		·		ļ <del></del>	
	Date Sampled:	10/20/98		10/20/98				!		! <del></del> _	
	%Moisture:	18		11			<del></del>	ļ		ļ	
	PH:	6.8		6.6		ļ <del></del>	<del></del>	ļ		ļ	
	Dilution Factor:	1.0 		1.0				l			<del></del>
	Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1	Acenaphthene	400_	_U_	370_	_U_					\	
į	2,4-Dinitrophenol	1000_	U	930_	_U_	1					
	4-Nitrophenol	_1000_	U	930	ʊ			1			
	Dibenzofuran	400_	U	370_	_U_						
	2,4-Dinitrotoluene	400_		370_	บ_						
	Diethylphthalate	400_	_U_	370_	_ับ_						
	4-Chlorophenyl-phenylether	400_	_U_	370_	U_						
,	Fluorene	_400_	_U	370_	_บ_						
•	4-Nitroaniline	1000_	_U_	930_	_U_						
	4,6-Dinitro-2-methylphenol	1000_	U	930_							
	N-Nitrosodiphenylamine	400_	U	370_	_บ_						
	4-Bromophenyl-phenylether	400_	U		ַ ָּע_						
	Hexachlorobenzene	400	U	370_	_บ_						
	Pentachlorophenol	1000_	U	930_	U						
	Phenanthrene	400_	U	370	_บ_						
	Anthracene	400_	U	370_	υ						
	Carbazole	400_	U	370	ש						
1967"	Di-n-butylphthalate	400_	U	370_	_ʊ_						
	Fluoranthene	_59_	_J_	100_	_J_			1			
	Pyrene	64_	_J	110_	_J_					1	
	Butylbenzylphthalate	_54_	_J	370_	_U_			l		l	
	3,3'-Dichlorobenzidine	400_	_U_	370_	_U_	1				1	
	Benzo(a)anthracene	41_	_J	_64_	_J	1		1		1	
	Chrysene	_59_	_J_	  72	_J_			1		1	
	bis(2-Ethylhexyl)phthalate	190_		160_	_J_	1				l	
	Di-n-octylphthalate	400_	U	370_	_U_			1			
	Benzo(b) fluoranthene	82_		93_	_J						
	Benzo(k)fluoranthene	400_	U_	370_	_υ_						
	Benzo(a)pyrene	_53_	_J_	_66_	_J_						
	Indeno(1,2,3-cd)pyrene	48_	_J_	57_	J						
	Dibenz(a,h)anthracene	400_		370_							
	Benzo(g,h,i)perylene	86_	J	81	_J_						
				i							



Case #: 26593

SDG: ECML0

Site: Lab. : HIMCO DUMP, ELKHART

Lab. :
Reviewer:
Date:

S. Tobin 11/16/98

IEANJ

Sample Number:	ECMN4		ECMN7		1		1		<u> </u>	
Sampling Location:	SB14-0.5		SB13-0.5	,					:	
Matrix:	Soil		Soil							
Units:	ug/kg		ug/kg							
Date Sampled:	10/20/98		10/20/98							
%Moisture:	18		111							-
PH:	6.8		6.6		1					
Dilution Factor:	1.0		1.0							
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	— <del>−</del> 7la
Phenol	400_	<u> </u>	370_						 	
bis(2-Chloroethyl)ether	400		370				1			
2-Chlorophenol	400_		370_							
1,3-Dichlorobenzene	400		370			<del></del>				
1,4-Dichlorobenzene	400_	U	_370_				1			
1,2-Dichlorobenzene	400		_370_	_u_			i		İ	
2-Methylphenol	400		370	_u_						
2,2'-oxybis(1-chloropropan	400_				1					
4-Methylphenol	400_		370_	U						
N-Nitroso-di-n-propylamine	400_	_u_	_370_				1		1	
Hexachloroethane	400_	U		U						
Nitrobenzene	400	U	370_	U			i			
Isophorone	400_	U	370_						1	
2-Nitrophenol	400_		370_	_บ_	1					
2,4-Dimethylphenol	400_	U	370_	U	1					
bis(2-Chloroethoxy)methane	400_	ับ	370_	_บ_					1	
2,4-Dichlorophenol	400_		370_						1	
1,2,4-Trichlorobenzene	400_	U	370_	_ʊ_	1					
Naphthalene	_400_	_U_	· — —							
4-Chloroaniline	400_	_บ_		U						
Hexachlorobutadiene	400_				· .					
4-Chloro-3-methylphenol	400_		370							
2-Methylnaphthalene	400		370							
Hexachlorocyclopentadiene	400		370							
2,4,6-Trichlorophenol	400_		· — —	U			]			
2,4,5-Trichlorophenol	1000		930_				i		1	
2-Chloronaphthalene	400_	_บ_	370_							
2-Nitroaniline	1000		930		1		1		1	
Dimethylphthalate	400_				i	<del></del>	i			
Acenaphthylene	400_	_ט_	370							
2,6-Dinitrotoluene	400_		·			<del>-</del>				
3-Nitroaniline	1000		. – –	U						
	i				i		1			
										~

Case #: 26593

SDG: ECML0

Site:

HIMCO DUMP, ELKHART

Lab.: IEANJ
Reviewer: S. Tobin
Date: 11/16/98

Sample Number:	ECMM7		ECMNO		ECMN1	<del>-</del>	ECMN2		ECMN3	
Sampling Location:	SB06-2		SB10-0.5	5	SB10-10		SB10-2		SB10-6	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/19/98	3	10/20/98	Ė	10/20/98	3	10/20/9	3	10/20/98	3
%Moisture:	6		8		8		4		6	
PH:	5.5		5.4		5.1		4.9		4.7	
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	   Result	Flag	Result	Flag
Acenaphthene	350_		_360_		360_		340_	U	_350_	
2,4-Dinitrophenol	880_		900		900_		_860_		880_	
4-Nitrophenol	880_	U	_900_	U	_900_		_860_		_880_	
Dibenzofuran	350_		360_	U	360_		_340_		350	
2,4-Dinitrotoluene	_350_	U	360_		360_		340_		350_	U
Diethylphthalate	350_	_U_	360_	_U_	360_	_บ_	340_	U	350_	U
4-Chlorophenyl-phenylether	_350_	_บ_	_360_	_บ_	]_360_	_U_	_340_	์_บ_	350_	_U
/ Fluorene	_350_	_U_	360_	_U_	360_	_U_	340_	_ʊ_	350_	_U_
4-Nitroaniline	_880_	_U_	_900_	_U_	900_	_U_	860_	U	_880_	_U_
4,6-Dinitro-2-methylphenol	_880_	_U	_900_	_U_	_900_	_U_	860_	U	_880_	_U_
N-Nitrosodiphenylamine	<u>.</u> 350_	_U	_360_	_U_	_360_	_U_	_340_	_u_	350_	_U_
4-Bromophenyl-phenylether	_350_	_u_	_360_		1_360_	_U_	340_	_U_	_350_	_U
Hexachlorobenzene	_350_	_U_	_360_		_360_		340_	_U_	350_	_U_
Pentachlorophenol	_880_	_U_	_900_	_U	_900_	_U_	860_	_U	1880_	_U_
Phenanthrene	_350_	_u_	_360_	_U_	360_	_u_	_340_	_U	√_350_	_U_
Anthracene	350_	_u_	_360_	_U	360_	_u_	340_	_n_	350_	_u_
Carbazole	_350_	_U_	360_	_U_	_360_	_U_	340_		350_	_U_
Di-n-butylphthalate	_350_		_360_	_U	360_		_340_		350_	_u_
Fluoranthene	_350_		_360_		_360_		340_		350_	_U_
Pyrene	_350_		360_		_360_				_350_	_u_
Butylbenzylphthalate	_350_	_U	_360_	_U_		_U_	_340_		350_	_U_
3,3'-Dichlorobenzidine	_350_		_360_		360_		340		_350_	_u_
Benzo(a) anthracene	_350_		360_	_U	360_	_u_	340_		_350_	_บ_
Chrysene	_350_	_u_	360_	_ט_	_360_	_u_		_u_		_u_
bis(2-Ethylhexyl)phthalate	_460_		_140_	_J_			_71_		_350_	_u_
Di-n-octylphthalate	_350_		_56_	_J_	70_		_340_		_350_	_U_
Benzo(b) fluoranthene	_350_	_u_	360_	_u_	_360_	_u_	_340_	U	-	_u_
Benzo(k) fluoranthene	_350_		_360_		_360_		_340_		_350_	_u_
Benzo(a)pyrene	_350_		_360_	_U	_360_		_340_		_350_	_U_
Indeno(1,2,3-cd)pyrene	_350_	_U_	360_	_u_		_u_	_340_	_u_		_u_
Dibenz(a,h)anthracene	_350_		360_		_360_		_340_		_350_	_U_
Benzo(g,h,i)perylene	_350_	_u_	7360_	_u_	360_	_n_	_340_	_ʊ_	1_350_	_n_
I	l		·		1		·		I	



Case #: 26593

SDG: ECML0

Site:

HIMCO DUMP, ELKHART

Lab.: IEANJ
Reviewer: S. Tobin
Date: 11/16/98

Sample Number:	ECMM7		ECMNO		ECMN1		ECMN2		ECMN3	
Sampling Location:	SB06-2		SB10-0.	5	SB10-10		SB10-2		SB10-6	
Matrix:	Soil		Soil	_	Soil		Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/19/98	3	10/20/98	8	10/20/98	2	10/20/98	<b>)</b>		_
%Moisture:	6	•	18		18	•	10/20/98   4	3	10/20/9	8
PH:	15.5		15.4		15.1		4.9		-	
Dilution Factor:	1.0		1.0		1.0				4.7	
principal ractor.	1.0		1.0		1 1 . 0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Fla
Phenol	_350_		360				340		]_350_	
bis(2-Chloroethyl)ether	350_		360_		_360		340		_350_  _350_	_u_ _u_
2-Chlorophenol	350_		_360_		_360		340_		350_	_u_ _u_
1,3-Dichlorobenzene	350_		360		360				350_	_u_ _u_
1,4-Dichlorobenzene	_350_		360_		360		340_		_350_	
1,2-Dichlorobenzene	350		360				340_		350_	
2-Methylphenol	350_	U	_360_		360		_340_	-	350	- ·
2,2'-oxybis(1-chloropropan	350_		_360_		_360		340		350	
4-Methylphenol	350_		360		_360_		340		_350_	Ū
N-Nitroso-di-n-propylamine	_350_	U			360		340		350	
Hexachloroethane	350_				360		340		350	_u_ _u_
Nitrobenzene	350		_360_				_340_		350_	_U_
Isophorone	_350_		_360_	u				_U_	350_	_U_
2-Nitrophenol	_350_		_360_		_360		_340_		350	_u_ _u_
2,4-Dimethylphenol	_350_		360				340		_350_	
bis(2-Chloroethoxy)methane	_350_		_360_	<b>-</b> u			340		350	
2,4-Dichlorophenol	_350_		_360_	_u_			_340_		350_	_u_ _u_
1,2,4-Trichlorobenzene	350		_360_		_360_		340_		350_	U
Naphthalene	350_		360	_U_	360		340		350	_n_ o_
4-Chloroaniline	_350_				_360		_340		_350_	_U_
Hexachlorobutadiene	_350_		360		360_		_340_		350_	_U_
4-Chloro-3-methylphenol	_350_		_360_		_360		340		_350_	_n_ 
2-Methylnaphthalene	_350_				_360_		340		350_	_u_ u_
Hexachlorocyclopentadiene	_350_		360		_360_		340_		_350_  _350_	_n_ o_
2,4,6-Trichlorophenol	350		360		360_		340		350	_u_ _u_
2,4,5-Trichlorophenol	880		_900_		900		860_	_0_		_u_
2-Chloronaphthalene	350		360		360		340_		000_  350_	_u_ o_
2-Nitroaniline	880_	~	· <del>-</del> -		900		_860_	_0_	880	
Dimethylphthalate	_350_		360		_360_				350	_U_
Acenaphthylene	350_		360_		360		340_		] _350_   _350_	_u_
2,6-Dinitrotoluene	350		360		360		340_			
3-Nitroaniline	_880_		900_		900		860	_U		_U_
						_U	_000_	_u_	_880_	U_

Case #: 26593

SDG: ECML0

Site: Lab. : HIMCO DUMP, ELKHART

IEANJ

Reviewer:	S. Tobin
Date:	11/16/98

-	i O a No	ECML6		DOM 7		L DOWN 0		ECML9		ECMM6	
	Sample Number:	ECML6   SB04-0.5		ECML7		ECML8   SB04-6		ECML9   SB06-0.5		ECMM6   SB06-10	į i
	Sampling Location:			SB04-2				SBU6-U.5   Soil	)		!
	Matrix:	Soil		Soil		Soil		,		Soil	1
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	i .
	Date Sampled:	10/19/98		10/19/98		10/19/98		10/19/98	<b>,</b>	10/19/98	3
	%Moisture:	6		7		21		9		10	!
	PH:	6.1		6		6.3		5.7		5.6	ļ
	Dilution Factor:	1.0		1.0		1.0		1.0		1.0	. 1
	Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
*	Acenaphthene	350_		350	_ <del>U</del> _	420_		360_		370_	
	2,4-Dinitrophenol	_880_		890	_ʊ_	_1000_		910_	ับ	_920_	U {
	4-Nitrophenol	880_	ับ	890	_U_	1000	ับ	910_	ับ	920_	U
	Dibenzofuran	350_	บ	350_	U	420_		360_	_บ_	370	_U_
	2,4-Dinitrotoluene	_350_		_350_						370	
	Diethylphthalate	350		_350_				360_		370	
	4-Chlorophenyl-phenylether	_350_		350		_420_		_360_		370_	_U
1	Fluorene	350_		_350_	U			360_		370	_U
	4-Nitroaniline	880		890			_u_	_		920	_U_
	4,6-Dinitro-2-methylphenol	880_		890_		1_1000_	_	910		_920_	U
	N-Nitrosodiphenylamine	_350_		350						370_	U
	4-Bromophenyl-phenylether	350_		350		· — —		360		370	U
	Hexachlorobenzene	_350_		350		420_		360_		370_	_U
	Pentachlorophenol	880_		890		1000_	_U_	910		920	_U_
	Phenanthrene	350		350		420				370	_บ_
	Anthracene	350		350_	_u_	·		360		370_	_ט_
	Carbazole	_350_		350_				360_		370	_U_
1 100	Di-n-butylphthalate	350_		350		420_		360_		370_	
	Fluoranthene	350		350_		420_	U			370_	U
	Pyrene	350		350				_360_		370	-u
	Butylbenzylphthalate	350_		350		420_		360_		370	_U_
	3,3'-Dichlorobenzidine	_350_		350_		420_	~ ປ	· — —		370_	_U_
	Benzo(a) anthracene	350		350		420		360		370_	
	Chrysene	350		350_		420		360_		370	_u_ i
	bis(2-Ethylhexyl)phthalate	350		350		420		360		370	
	Di-n-octylphthalate	350		350		420_		360		370_	_U_ [
	Benzo(b) fluoranthene	350_		  350		_420_		_360_		370	_ʊ_
	Benzo(k) fluoranthene	350_	_U_			420_		360_		370_	_ט_
	Benzo(a) pyrene	350_		_350_		420_				370_	
	Indeno(1,2,3-cd)pyrene	350_		_350_		420_		360		370_	
	Dibenz(a,h)anthracene	350_		_350_		420		360_		370_	_u_
	Benzo(g,h,i)perylene	61_	_J_	50_		74_		360_			
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			; ·-		]	-~-	)	_~~	<u> </u>	
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Case #: 26593

SDG: ECML0

Site:

HIMCO DUMP, ELKHART

Lab.: IEANJ
Reviewer: S. Tobin
Date: 11/16/98

Sample Number:	ECML6		ECML7		ECML8		ECML9		ECMM6	— — <u>-</u>
Sampling Location:	SB04-0.5		SB04-2		SB04-6		.SB06-0.5		SB06-10	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	ug/kg ·		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/19/98		10/19/98		10/19/98		10/19/98		10/19/98	3
%Moisture:	6		17		21		9		10	
PH:	6.1		6		6.3		5.7		5.6	
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Phenol	350	<u> </u>	 350		420_		360_	U	370_	
bis(2-Chloroethyl)ether	350		350		420_		360_		_370_	_ับ_
2-Chlorophenol	_350_	_ט_	350	U	420		360_		370_	_บ_
1,3-Dichlorobenzene	_350_		350_		420_				370_	_u_
1,4-Dichlorobenzene	350_		350_	U	420_		_360_	_U_	370_	_U_
1,2-Dichlorobenzene	350		350	_บ_	420_		360_	U	370_	ប_
2-Methylphenol	350_		350_	บ	420_		360_	_U	370_	7
2,2'-oxybis(1-chloropropan	350	ַ ט	350	U	420	U	360	_U_	370_	
4-Methylphenol	350		350_	U	420_		360_	_U	370_	_U_
N-Nitroso-di-n-propylamine	_350_		350_		420_		360_	_บ_	370_	_Մ_
Hexachloroethane	350		350	_u_	420_	U	360	_U_	370_	_U_
Nitrobenzene	350		350	_ บ _	:		360_	_u	370_	_U_
Isophorone	_350_				420_		360_		370_	_U_
2-Nitrophenol	350		350_	_บ_	420		360_		370_	_u_
2,4-Dimethylphenol	350		350_		420_		_360_		370_	U
bis(2-Chloroethoxy)methane	_350_		350_		420_		_360_		370_	_ับ
2,4-Dichlorophenol	350		350_	U	420		360		370_	7
1,2,4-Trichlorobenzene	350		350		420_		360_	_U_	370_	_U_
Naphthalene	_350_		350_	_บ_	420_		360_	U	370_	_U_
4-Chloroaniline	350		350_		420		360_	_บัั	370_	_បJ_
Hexachlorobutadiene	350		350		420		360_		370_	_U_
4-Chloro-3-methylphenol	350_		350_		420_		360	_u_		_J_
2-Methylnaphthalene	350		350_				360_	_u_	370_	_U_
Hexachlorocyclopentadiene	350_		350		420_		360		370_	U
2,4,6-Trichlorophenol	350_				420_		360_		370_	U
2,4,5-Trichlorophenol	880		890		1000_		910_	_บ_	920	_u_
2-Chloronaphthalene	350		350		:				370	_U_
2-Nitroaniline	880_	`_บ_	_890_		1000_		910		920	_u_
Dimethylphthalate	350				420_		360		370_	
Acenaphthylene	 	ָ <u>บ</u>	350				360_		:	
2,6-Dinitrotoluene	350_		·		420_		360_		370_	_u_
3-Nitroaniline	880_		890_				910_	_u_		_U
	1		1		1		1		1	

Case #: 26593

SDG: ECML0

Site:

HIMCO DUMP, ELKHART

Lab.:
Reviewer:
Date:

	<del></del>		<del>,</del>		7					
Sample Number:	ECML3		ECML4		ECML4MS		ECML4MSI		ECML5	
Sampling Location:	SB18-6		SB05-0.5	5	SB05-0.5	5	SB05-0.5	5	SB05-2	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/19/98	3	10/19/98	3	10/19/98	3	10/19/98	3	10/19/98	3
%Moisture:	10		6		8		5		4	
PH:	7.6		7.8		7.1		7.8		7.9	
Dilution Factor:	1.0		1.0		1.0		1.0		1.0.	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flaç	Result	Flag
Acenaphthene	370_		350_	ับป	1100_		880_		340	
2,4-Dinitrophenol	920_		_880_		900_	U	870_	Ū	_860_	_U_
4-Nitrophenol	920_		880_		1600_		_1300_		_860_	U
Dibenzofuran	370		350	_ט_					_340_	_n_
2,4-Dinitrotoluene	370_	U	350_		960		820		340	_v_
Diethylphthalate	370_		350_		360	_U_		Ū	340	
4-Chlorophenyl-phenylether	_370_		_350_		360_				340	_U_
Fluorene	370_		350		360		350_		340_	
4-Nitroaniline	920_		880_				870_		860_	
4,6-Dinitro-2-methylphenol	920		880		_		870		_860_	U
N-Nitrosodiphenylamine	370		350		360_		_350_		340_	
4-Bromophenyl-phenylether	370		]_350_		360_		350			_ע_
Hexachlorobenzene	370_		_350_			_ʊ_	350		340	Ū.
Pentachlorophenol	920		880_				1200_		860	U_
Phenanthrene	86_		46_		320_	<u>.</u> [J	140	J	140	
Anthracene	370		350_				350		340	U_
Carbazole	370		350		360_		350_		_340_	
Di-n-butylphthalate	370_		350_		360_		350_		_340_	
Fluoranthene	130_	_J_	130		630		_280_	J	210	
Pyrene	170_	_J_	_140_	_J	1600_		_1300_		210	_J_
Butylbenzylphthalate	1_370_	U	350_		360_	_U_	_350_	_U_		U
3,3'-Dichlorobenzidine	370_	_ʊ	350		360_	U		_u_	340	
Benzo(a)anthracene	77_	J	75_		:		170_		120_	
Chrysene	100_		84_		380_		180		110	_J_
bis(2-Ethylhexyl)phthalate	370_	u	350	_บ	440		550		420	
Di-n-octylphthalate	370_		350_		360_	U	_350_	_ט_		_U_
Benzo(b) fluoranthene	100		1_110_		590_		230	_J_		_J_
Benzo(k)fluoranthene	370_		350		140	_J_	61		38_	_J_
Benzo(a)pyrene	89		89_		_460_		_180_			_J_
Indeno(1,2,3-cd)pyrene	54_		79_				100_		62_	_~_ _J_
Dibenz(a,h)anthracene			350_	_ บ_	75_		350_		340_	 U_
Benzo(q,h,i)perylene	  93		110_		360_		130_	_J_		_J_
		<del></del> -						_~_		

Case #: 26593

SDG: ECML0

Site:

HIMCO DUMP, ELKHART

Lab. :
Reviewer:
Date:

Sample Number:	ECML3		ECML4		ECML4MS		ECML4MSD		ECML5	
Sampling Location:	SB18-6		SB05-0.5	5	SB05-0.5		SB05-0.5		SB05-2	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/19/98		10/19/98	3	10/19/98		10/19/98		10/19/9	B
%Moisture:	10		6		8		5		4	•
PH:	7.6		7.8		7.1		7.8		17.9	
Dilution Factor:	11.0		11.0		1.0		1.0		1.0	
	1						1		1	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	-la
Phenol	370		350_		1600_		  _1300_			
bis(2-Chloroethyl)ether	370_		350_				350_	U	340_	_ŭ_
2-Chlorophenol	370_		350_		1500_		1300		340	_u
1,3-Dichlorobenzene	370		350		920_		830_		340	_u
1,4-Dichlorobenzene	370		350_		_890_		800_		340	_u
1,2-Dichlorobenzene	370_	U	350		_360_		350_	_U_	340	
2-Methylphenol	370		350		_360_		350_	<del>"</del> -	340	7
2,2'-oxybis(1-chloropropan			350_		_360_		1_350_		340_	
4-Methylphenol	370_		350		_360_		350_		340_	
N-Nitroso-di-n-propylamine			350_		1000_		840_		340	_u_ _u
Hexachloroethane	370_				_360_		350_	17	_340_	_u_ _u_
Nitrobenzene	370_		350_				350_		1_340_ 1_340	
Isophorone	370_		350		_360_		_350_  _350_		_340_	_U
2-Nitrophenol	370		350_		_360_		_350_  _350_		_340_	U
2,4-Dimethylphenol	370_		350_		_360_		350_		340_	_u
bis(2-Chloroethoxy)methane	370_		350_		_360_  _360_		_350_  _350_		340_	_°_ U_
2,4-Dichlorophenol	370_		350_		_360_  _360_		_350_  _350_			J_
1,2,4-Trichlorobenzene	370_		] _350_   _350_	_u	1000_		840		_340_   340	
Naphthalene	370_		_350_		_120_	<del>-</del>	_840_  _350_	77	· <del>-</del> -	_U
4-Chloroaniline	370_		] _350_ ] _350_		_360_				_340_	_U_
Hexachlorobutadiene	370_		350_		_360_		_350_ _350_		340_	_U
4-Chloro-3-methylphenol	_370_  _370_		_350_  _350_		_1600_	_U		_U	340_	_u_
2-Methylnaphthalene	370_		_350_  _350_				_1400		340_	_u
Hexachlorocyclopentadiene	_370_  _370_				_360_		_350_		340_	_U
2,4,6-Trichlorophenol	_370_  _370_	_u_ _u	_350_  _350_		_360_	_U_	_350_	_U	_340_	_U
2,4,5-Trichlorophenol	_370_  _920_				_360_		_350_		340_	_U
2-Chloronaphthalene	_920_   370		880_		_900_		870_		860_	_U_
<del>-</del>		- <u>u</u> -			_360_		350_		_340_	_Մ_
2-Nitroaniline	920_	_u	_880_		_900_		_870_	_u_	,	_บ_
Dimethylphthalate	_370_		350_		40_		_350_	_U_		_ש_
Acenaphthylene	370_	~ <u>u</u> _	_350_	_u_			_350_	_u_	_340_	_บ_
2,6-Dinitrotoluene	370_		_350_		_360_		_350_		340_	_u_
3-Nitroaniline	920_	_u	_880_	_u_	_900_	_ט_	870_	_U_	860_	_u_
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Case #: 26593

SDG: ECML0

Site: Lab. : Reviewer:

Date:

HIMCO DUMP, ELKHART

_									:		
	Sample Number:	ECMK8		ECMK9		ECML0		ECML1		ECML2	
	Sampling Location:	SB15-0.5		SB15-2		SB15-6		SB18-0.5		SB18-2	
	Matrix:	Soil		Soil		Soil		Soil		Soil	
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	1
	Date Sampled:	10/19/98		10/19/98		10/19/98		10/19/98		10/19/98	3
	%Moisture:	10		6		0		10		8	1
	PH:	7.2		7.7		7.3		7		7.6	ļ
	Dilution Factor:	1.0		1.0		1.0		1.0		1.0	
		Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
	Acenaphthene	73_	_J_	350	U	330_		370_		37_	
	2,4-Dinitrophenol	920_		_880_		830_		920_		900_	
	4-Nitrophenol	920_	U	_880_			_บ_	920_		900_	_U_
	Dibenzofuran	_370_		350_		330_		370_		360	_u
	2,4-Dinitrotoluene	370_		_350_		_330_		  370		360	U [
	Diethylphthalate	370		350				_370_		360_	
	4-Chlorophenyl-phenylether	_		350_		330_			U	360_	
1	Fluorene	370		350_		330		370_		44_	_J_
	4-Nitroaniline	920_	U	880			U	920_		900_	
	4,6-Dinitro-2-methylphenol			_880_		830_		920		_900_	U
	N-Nitrosodiphenylamine	370		350_		330_	- U	370		360_	_บ_
	4-Bromophenyl-phenylether	370_	_u_	350	U	330		370		_360_	
	Hexachlorobenzene	370_		350_		330_	U			360	
	Pentachlorophenol	920		_880_		_830_				900_	_U
	Phenanthrene	360		280_	J	170_		_320_		_590_	
	Anthracene	63_		  53		41_		67_		130	_J_
	Carbazole	; [37		350_	U_			46_		49_	_j
1	Di-n-butylphthalate			_350_		_330_		370_		360_	U
	Fluoranthene	730_		450_		360		510		1200_	
	Pyrene	900		_540_		430		470		1500	
	Butylbenzylphthalate	370		350		_330_		370_	U	360_	_U_
	3,3'-Dichlorobenzidine	370		350_		330_	_U_	370	_U_	]_360_	_u l
	Benzo(a) anthracene	620		260		250_	_J	270_	_J_	770_	
	Chrysene	760_	-	270_	_J_	_260_	_J_	270_	_J_	780_	
	bis(2-Ethylhexyl)phthalate	370		350		330_	ַ ט	370_	_U_	360_	_U
	Di-n-octylphthalate	370		350			_u			_360_	_u_
	Benzo(b) fluoranthene	1600_		390		490_	- <b>-</b>	410_		1000_	
	Benzo(k) fluoranthene	400	~	_140_	_J_		_J_			340_	_J_
	Benzo(a) pyrene	1000_		290		430		280_		900	
	Indeno(1,2,3-cd)pyrene	1200		230_	_J	400		200_	_J_		
	Dibenz(a,h)anthracene	320	J	57_		99_	J	58_		200	_J_
	Benzo(g,h,i)perylene	1500_		310		; — —		240_		820	
						i				1	

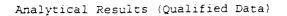
Case #: 26593

SDG: ECML0

Site: Lab. : HIMCO DUMP, ELKHART

Reviewer:

Sample Number:	ECMK8		ECMK9		ECMLO		ECML1		ECML2	
Sampling Location:	SB15-0.	5	SB15-2		SB15-6		SB18-0.5	-	SB18-2	
Matrix:	Soil	_	Soil		Soil		Soil	•	Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		•	
Date Sampled:	10/19/98	9	10/19/9	Ω	10/19/98	<b>.</b>	10/19/98	,	ug/kg   10/19/9	0
%Moisture:	10,13,3	-	10/13/30   6	0	10/13/36   0	)	10/19/98	3	8	В
PH:	7.2		7.7		7.3		10   7		7.6	
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	
					1		1.0		1 1 . 0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	- la
Phenol	370_		_350_		330_	Ū	370_		360	
bis(2-Chloroethyl)ether	370_	_บ_	350_		330_					
2-Chlorophenol	370_		350		330_				360	
1,3-Dichlorobenzene	370		350		_330_		370_		360	
1,4-Dichlorobenzene	370_	_u	350_		_330_				360_	
1,2-Dichlorobenzene	370_	_U_	_350_		330_	ַ	370	_u_	360	77
2-Methylphenol	370_	_U_	_350_		330_		370_	U	· — —	7
2,2'-oxybis(1-chloropropan	370_	_U_	350		330_				360_	
4-Methylphenol	370_		350				370		360	
N-Nitroso-di-n-propylamine	370_		_350_				370_		360_	
Hexachloroethane	370_	U	_350_		_330_	_ʊ_			360_	
Nitrobenzene	370_		350		_330_		_370_		360_	
Isophorone	370_		_350_		_330		_370_		360	
2-Nitrophenol	_370_	_U	350		330				_360_	_U_
2,4-Dimethylphenol	370_		_350_		330	_ú_	370	U	360	
bis(2-Chloroethoxy)methane	370_	_U_	_350		_330		_370_		360_	
2,4-Dichlorophenol	370_		350		_330		_370_		_360_	,
1,2,4-Trichlorobenzene	370_	U	_350_				370_		360	_U_
Naphthalene	370_		350		_38_		370		50	
4-Chloroaniline	370_		350		_330_		370_		_360_	
Hexachlorobutadiene	370_	U	_350_				_370_		360	U
4-Chloro-3-methylphenol	370_		_350_		_330		_370		360	
2-Methylnaphthalene	370_		350		_330		370_		_48_	
Hexachlorocyclopentadiene	370_		350		330		370_		360	
2,4,6-Trichlorophenol	370_		_350_		_330_		_370_		_360_	
2,4,5-Trichlorophenol	920_		880		_830_				900_	
2-Chloronaphthalene	370		_350_		_330_		370_		360	_บ_
2-Nitroaniline	920_		_880_		830		920_		900_	_U_
Dimethylphthalate	370		_350_		330_		_320_   _370_		360_	_u
Acenaphthylene	370		_350_		67_	_J_	370		_83_	
2,6-Dinitrotoluene	  370		_350		330		370	_U_	360	_uu_
3-Nitroaniline	920_		_880_		830		_920_		900_	_u_ _u_
	i					-~-	1		1	
			·		l		l		I .	



Case #: 26593

SDG: ECML0

Site: HIMCO DUMP, ELKHART

Lab.: IEANJ
Reviewer: S. Tobin
Date: 11/16/98

-				<del></del>						<del></del>	
-	Sample Number:	ECMN4		ECMN7		ECMN7RE		ļ			
1	Sampling Location:	SB14-0.5		SB13-0.5		SB13-0.5	5	!		!	
1	Matrix:	Soil		Soil		Soil		!			
}	Units:	ug/kg		ug/kg		ug/kg		ļ		ļ <del></del>	
	Date Sampled:	10/20/98		10/20/98		10/20/98	3	l		l	
1	%Moisture:	18		11		11		l		·	
	PH:	1				1		l		l	
l	Dilution Factor:	1.0		1.0		1.0		ļ		! <del></del>	
1	Volatile Compound	Result	F120	   Result	Flac	Result	Flac	Result	Flac	Result	Filad
	voiatile compound	Lycaure	TTU	Result	110	Kebare		Rebuil	:		1.44
	Chloromethane	12_		11_		11_	_עַד_				
ĺ	Bromomethane	12_	_บ_	111	ືບປ	11_	_ບປ	i			
j	Vinyl Chloride	_12_		111		11_	_ັບJ	1			
j	Chloroethane	12		111	_	1_11_	_ັບJ				
į	Methylene Chloride	12_		111							
ĺ	Acetone	12_		j_11_		1_11_	ັບJ				
j	Carbon Disulfide	12_		1_11_		1_11_	ບປ				
j	1,1-Dichloroethene	12_				1_11_					
ĺ	1,1-Dichloroethane	12_	U	[_11_		111	ບJ				
į	Total 1,2-Dichloroethene	12_		1		1_11_					
	Chloroform	12_		11_		11_				1	
1	1,2-Dichloroethane	12		1_11_		111	ບJ			1	
İ	2-Butanone	12_		111		111	ບJ				
1	1,1,1-Trichloroethane	1_12_		111		11_		1		1	
1	Carbon Tetrachloride	12_		11_		111	ບJ			1	
1	Bromodichloromethane	12_	_U	11		11_	UJ_			1	
į	1,2-Dichloropropane	12_		1_11_		11_	ບJ				
ı»,	Cis-1,3-Dichloropropene	12_		  11		1_11_	_ັບJ				
1	Trichloroethene	12_	_บัง	111		11_	ີບJ				
1	Dibromochloromethane	12_		1_11_		11_		1		\	
1	1,1,2-Trichloroethane	12_		:		11_	ບJ			J	
1	Benzene	12_		111		11_	ບJ				
ļ	Trans-1,3-Dichloropropene	]_12_		]_11_		11_	ບJ				
1	Bromoform	12		111_		111_	ບJ				
j	4-Methyl-2-pentanone	12_		111		111	_R_				
Ì	2-Hexanone	12_		111		_11_	_R	/ 			
Ì	Tetrachloroethene	12		111		111_	_R_				
Ì	1,1,2,2-Tetrachloroethane		U			11_	_R_				
ĺ	Toluene	12		1_11_	_R_	111	_R_			1	
Ì	Chlorobenzene	12		11_	_R_	111	_R_				
	Ethylbenzene	12_	U	11_	R		_R_				_
1	Styrene	12_	_U_	11_	_R_		R			1	
i	Xylene (total)	1_12_		11_	_R_	111_	_R_			i ———	
	- · · · · · · · · · · · · · · · · · · ·	;		;		;		; ———		:	



Case #: 26593

SDG: ECML0

Site:

HIMCO DUMP, ELKHART

Lab. :
Reviewer:
Date:

Sample Number:	ECMM7		ECMNO		ECMN1		ECMN2		ECMN3	
Sampling Location:	SB06-2		ECMNO   SB10-0.5		SB10-10		SB10-2		SB10-6	
Sampling Location: Matrix:	SBU6-2   Soil		1		(		•		1	
matrix: Units:			Soil		Soil		Soil		Soil	
	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	_
Date Sampled:	10/19/98	3	10/20/98		10/20/98		10/20/98	\$	10/20/98	8
%Moisture:	6		8		8		4		6	
PH:					[				1	
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	F1
Chloromethane		U	11_		  _11_	_U_	10_		11_	
Bromomethane	_11_		11_		111		10_		11	
Vinyl Chloride	_11_		  11		1_11_		10_		-	
Chloroethane	_11_				11_		10_		11_	_u _u
Methylene Chloride	11_		11_		11_	U			11_	
Acetone	_11_		111		_11_		10_		11_	
Carbon Disulfide	_11_		111_		1_11_			u_		- ,
1,1-Dichloroethene	_11_		11_		  11		10_		111_	,
1,1-Dichloroethane	_11_		11_		11_		_10_		111_	
Total 1,2-Dichloroethene	11_		11_		11_		10_		1-11	
Chloroform	_11_		11_		11_		10_		111_	
1,2-Dichloroethane	_11_		11_		11_		10_	U		
2-Butanone	_11_		11_	_u_	111		10_		11_	
1,1,1-Trichloroethane	11_		  11				1_10_		11_	
Carbon Tetrachloride	11_		1_11_	_ʊ			10_		11_	
Bromodichloromethane	11_		1_11_		1_11_		10_			_n _n
1,2-Dichloropropane	11_		1_11_		1_11_		_10_		1_11_	
Cis-1,3-Dichloropropene	11_		11_		1_11_	_u_			111	_U
<del></del>	11_				_11_		-		111	
Dibromochloromethane	11_		  11		1_11_	U	10_		1_11_	_u _u
1,1,2-Trichloroethane	111_		11_		11_	_n_ 			1_11_	_u
Benzene	  11		111_	_n		_u_			1_11_	
Trans-1,3-Dichloropropene	1_11_		1_11_		111_	_0_	104	_U_	1_11_	
Bromoform	1_11_				_++_   _11_		1_10_		-	_t
4-Methyl-2-pentanone	1_11_		_11_   _11_		_11_   _11_				1_11_	
2-Hexanone	1_11_	_g	_11_   _11_		_++_   _11_	_U	10_		1_11_	
Tetrachloroethene	1_11_		_11_	_U		_U	· <del></del>	_U		 ז
1,1,2,2-Tetrachloroethane		~ _U			_11_		_10_	_UJ_	. — —	
Toluene					_11_		1-10-		_11_	<i>-</i> ,
Chlorobenzene	1_11_		_11_		_11_		1-10-	_ <u>'</u> ',	. — —	, , ,
	_11_				_11_		1-10-	_ <u>".</u> _	-	
Ethylbenzene	11_		_11_		_11_		10_	_ <u>n</u> _		t
Styrene (torsa)	1_11_		11_		_11_		10_		_11_	
Xylene (total)	11_	U	1_11_	U	11_	U	10_	_U_	_11_	_t

Case #: 26593 SDG: ECML0

Site: HIMCO DUMP, ELKHART

Lab.: IEANJ
Reviewer: S. Tobin
Date: 11/16/98

						<del></del> .				
Sample Number:	ECML6		ECML7		ECML8		ECML9		ECMM6	1
Sampling Location:	SB04-0.	5	SB04-2		SB04-6		SB06-0.5	5	SB06-10	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	ŀ
Date Sampled:	10/19/98	3	10/19/98	3	10/19/98	3	10/19/98	3	10/19/98	3 [
%Moisture:	6		17		21		9		10	Ì
PH:	İ		İ		İ					1
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	1
Volatile Compound	Result	Flaç	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Chloromethane	11_				13_				   _11_	U
Bromomethane	11_		11_	_u	13_	_บ_		_u_	11_	_U
Vinyl Chloride	11_		11_		13_					U
Chloroethane	11_		111_		13_		_11_		11_	
Methylene Chloride	111_	_U_		U			  11		111_	_u_
Acetone	111_				13_		11_		111	_u_
Carbon Disulfide	11_		_11_		13_			u_		_U_
1,1-Dichloroethene	111		1_11_		13_			_u_	11	_U
1,1-Dichloroethane	111		11_	_u_	13_					U
Total 1,2-Dichloroethene	111		. — —		13_	U	11_		111	_U_
Chloroform	11_		11_		13_	_u_	11_		111_	_u
1,2-Dichloroethane	11_		_11_		13					_U [
2-Butanone	111_				13_		_11_		11_	
1,1,1-Trichloroethane	111_		111		13_		_11_		11_	_U
Carbon Tetrachloride	11_		11_		  13		111		111	_u
Bromodichloromethane	111		1_11_		13_	_u_				U
1,2-Dichloropropane	111_		111						11_	
Cis-1,3-Dichloropropene	111_		11_		13_				11_	
Trichloroethene	11_		11_					ບJ	11_	UJ_
Dibromochloromethane	11_	_u_			13_	_u	11_	U	11_	_U
1,1,2-Trichloroethane	111		11_	_u_	13_			_ʊ_	11_	_U
Benzene	11_		11_	_u_	13_	u			11_	_U
Trans-1,3-Dichloropropene	111		111_		13_	_u_	111_	์ _บ_	11_	_U
Bromoform	111_		11_		13_		11_	U	111_	_u_
4-Methyl-2-pentanone	111		11			_U_			111	U
2-Hexanone	11_	U			13_	U		_U_		_U_
Tetrachloroethene	111		111		13_		111_		111	_ັບJ
1,1,2,2-Tetrachloroethane	]_11_	-	11_		13_		11_		11_	
Toluene	11		111		13_		111_		111_	_u
Chlorobenzene	111		111_		13_		11_		_11_	_u
Ethylbenzene	111		[_11_		13_		[_11_		11_	_u
Styrene	1_11_	_u_	111				]_11_	_u_		_u_
Xylene (total)	111_	_	11_		13_		1_11_		111_	
< 1	<u> </u>		Ĭ							
										-

Case #: 26593

SDG: ECML0

Site:

HIMCO DUMP, ELKHART

Lab.: IEANJ
Reviewer: S. Tobin
Date: 11/16/98

Sample Number:	ECML3		ECML4		ECML4MS		ECML4MS	D	ECML5	
Sampling Location:	SB18-6		SB05-0.5	5	SB05-0.	5	SB05-0.	5	SB05-2	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/19/98	3	10/19/98	3	10/19/98	8	10/19/9	8	10/19/9	8
%Moisture:	10		6		8		5		4	
PH:					1					
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Fla
Chloromethane	1_11_						10	— —	10_	
Bromomethane	111		111_		111		10_		10_	_u_
Vinyl Chloride	11		11_		111_		10_		10_	_u_ u_
Chloroethane	11		11_		111_		10_		10_	_UJ
Methylene Chloride	11_		11_		111_		10_			_U_
Acetone	111		1_11_		111_		10_		10_	_U_
Carbon Disulfide	1_11_		111		1_11_		10_	u_		
1,1-Dichloroethene	111		1_11_		49_		52_		_10_	, )
1,1-Dichloroethane	1_11_		111_		_11_		10_	_ʊ_		
Total 1,2-Dichloroethene	1_11_		111_	_U_	11_		10_		10_	
Chloroform	j_11_		_11_		111_		10_		10_	
1,2-Dichloroethane	111		111		_11_		_10_		10_	U_
2-Butanone	1_11_		111		11_		10_		10_	_v_
1,1,1-Trichloroethane	1_11_		11_		11_		10_		10_	_U_
Carbon Tetrachloride	111_		11_		111_		1_10_		_10_	
Bromodichloromethane	1_11_		111_		111_		10_		10_	_u_
1,2-Dichloropropane	111_		11_		111		_10_		10_	
Cis-1,3-Dichloropropene	111_		11_		111_		10_		10_	U
Trichloroethene	1_11_		_11_		49_		_50_		10_	_0.
Dibromochloromethane	11_	U			11_		10_		10_	
1,1,2-Trichloroethane	11_				11_	_u_	_10_		10_	_U_
Benzene	111_		11_		50_		49_	-~-	10_	_U_
Trans-1,3-Dichloropropene	11_		11_		11_	_ʊ_	10	_U_	10	_u_
Bromoform	_11_		11_		111		10_		1_10_	_U_
4-Methyl-2-pentanone	111_		111		111		10_	_u		_u_
2-Hexanone	111_		11_		1_11_		10_			
Tetrachloroethene	111_		11_		1_11_		10_		10_	_n _n_
1,1,2,2-Tetrachloroethane		U_	. — —		11		1_10_		10_	
Toluene	111		1_11_		54_	_บ_	53_		10_	
Chlorobenzene	1_11_		111_		56_		_53_  _53_		1_10_	
Ethylbenzene	11_		1_11_			77				_ប_
Styrene	11_		111_		1_11_		10_		10_	
Xylene (total)	111_				1-11_		10_		10_	U_
Hyrene (cocur)	\ <b>-</b> **-		_11_		_11_		10_		_10_	_U_
	· ———		1		l		l		1	à

Case #: 26593

SDG: ECML0

Site:

HIMCO DUMP, ELKHART

Lab. : Reviewer: Date:

Sample	Number:	ECMK8		ECMK9		ECMLO		ECML1		ECML2	
	ng Location:	SB15-0.5	;	SB15-2		SB15-6		SB18-0.5		SB18-2	
Matrix		Soil		Soil		Soil		Soil		Soil	
Units:		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
	ampled:	10/19/98	l	10/19/9.8		10/19/98		10/19/98		10/19/98	ı
%Moist	<del>-</del>	10		6		1 0		10		8	
PH:		1		! !		1				; - }	
1	on Factor:	1.0		1.0		1.0		1.0		1.0	
	o 140202.	1 - 1 0									
Volati	le Compound	Result	Flag	Result	Flaç	Result	Flaç	Result	Flag	Result	Flaç
Chloro	methane	11_	U	11_	<del>- U</del>			11_	U	11_	_U_
Bromom	ethane	11_		11_		10_		11_		_11_	
•	Chloride	_11_		11_		10_		_11_			U
Chloro		11_		111		10_		11_	_UJ_		_บJ
,	ene Chloride		ֿ - ט	111		10_					
Aceton		11_	- U	22_		10_		  11			
Carbon	Disulfide	111		]_11_	U	10_		111		11_	U
•	chloroethene	111		11_		10_		  1		11_	
•	chloroethane	11_		1_11_		10_		11_		11	
	1,2-Dichloroethene	11_		11_		10_		_11_		111 .	
Chloro	•	1_11_				10_		1_11_		111	
	chloroethane	11_		11_		10_		11_		11_	
2-Buta		1_11_		11_		10_		1_11_		11_	U
	Trichloroethane	111	U_			10_		11_		11_	U
	Tetrachloride	1 _11_		11_		10_		111		_11_	
•	ichloromethane	1_11_		11_		1_10_	_u_				_U
•	chloropropane	1_11_		111		10_		111		111_	
•	3-Dichloropropene	1_11_		111_		1_10_		1_11_			_U
	oroethene	1_11_		1_11_		1_10_		1_11_		111_	
•	ochloromethane	111		111		1_10_		111_		11_	
	Trichloroethane	1_11_		111_		10_		1_11_		11_	
Benzen		_11_		111_		10_		1_11_		111_	
•	1,3-Dichloropropene	1_11_		111_		10_		1_11		11_	_U_
Bromof		1_11_		1_11_		1_10_	_u_		_u_		_u
•	yl-2-pentanone	1_11_			_u					11_	_u
2-Hexa			_U	_11_   _11_			_U_		_;,	1_11_	
•	chloroethene	_11_	_U	. – –		1_10_	_U_			111_	_U
		1-11-	_UJ_					1_11_			_บัง_
1,1,2,   Telus	2-Tetrachloroethane ne	_ <del>                                  </del>	U			1_10_	-,,	11_	_,,	_11_	_U
				1-11-		1_10_		1-11-		111_	
•	benzene	1_11_		_11_	-,,	1_10_		111_		1-11-	_ŭ_
	penzene	1_11_		_11_		1_10_		11_		_11_	_ <u>u</u> _
Styren		_11_		_11_		1_10_		_11_		_11_	
Xylene	(total)	_11_	_u_	11_	_U	10_	_ <sup>U</sup> _	_11_	_U_	_11_	_ <del>U</del> _
l		1		l		1		1		l	

#### Semivolatile Analysis Data - ECMN4 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMLO

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.39	410.000	
	ALDOL CONDENSATION PRODUCT	4.82	110000.000	
	UNKNOWN	5.56	2400.000	
	UNKNOWN	6.30	480.000	
	UNKNOWN	6.46	170.000	
	UNKNOWN ACID	12.47	160.000	
	UNKNOWN ACID	15.71	220.000	
	TRANS-CHLORDANE	17.60	160.000	
	UNKNOWN PAH	21.29	1200.000	
	UNKNOWN	21.47	180.000	
	UNKNOWN	22.24	690.000	
	UNKNOWN	22.44	160.000	
	UNKNOWN PAH	22.62	340.000	
	UNKNOWN	24.39	180.000	
	UNKNOWN	25.67	250.000	
	UNKNOWN	25.78	410.000	
	UNKNOWN	26.15	470.000	
	UNKNOWN	26.52	290.000	
	UNKNOWN	27.55	190.000	
	UNKNOWN	28.92	210.000	
	UNKNOWN	29.15	2800.000	
	UNKNOWN	30.08	330.000	
	UNKNOWN	30.14	200.000	
	UNKNOWN	30.44	390.000	
	UNKNOWN	30.57	430.000	
	UNKNOWN	30.94	190.000	
	UNKNOWN	31.21	410.000	
IF NAME	: ECMLO.SDG DATE: 11/09/98 TIME: 16:39 CADRE98	·	PAGE	: 2

CAS IUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION
	UNKNOWN	4.30	140.000
	UNKNOWN	4.38	380.000
	ALDOL CONDENSATION PRODUCT	4.80	100000.000
	UNKNOWN ALCOHOL	5.22	140.000
	UNKNOWN	5.56	2200.000
	UNKNOWN	6.30	430.000
	UNKNOWN	6.45	170.000
	UNKNOWN ACID	10.35	140.000
	UNKNOWN ACID	12.47	150.000
	UNKNOWN	17.42	250.000
	UNKNOWN	17.51	390.000
	UNKNOWN	17.60	350.000→
	UNKNOWN	17.73	170.000
	UNKNOWN	18.33	280.000
	UNKNOWN	18.48	650.000
	UNKNOWN	18.59	500.000
	UNKNOWN PAH	20.37	3100.000
	UNKNOWN	20.71	220.000
	UNKNOWN	21.32	160.000
	UNKNOWN	21.64	4100.000
	UNKNOWN	22.24	4000.000
	UNKNOWN	22.31	4000.000
	UNKNOWN	24.39	130.000
	UNKNOWN	25.76	210.000
	UNKNOWN	26.14	180.000
	UNKNOWN	29.12	920.000
	UNKNOWN	30.06	170.000
	UNKNOWN	30.44	170.000
	UNKNOWN	30.58	280.000
	UNKNOWN	31.18	230.000

Semivolatile Analysis Data - ECMN2 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMLO

AS JMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION
	UNKNOWN	4.30	150.000
	UNKNOWN	4.37	360.000
	ALDOL CONDENSATION PRODUCT	4.79	98000.000
	UNKNOWN ALCOHOL	5.20	130.000
	UNKNOWN	5.56	2000.000
	UNKNOWN	6.30	380.000
	UNKNOWN	6.45	140.000
	UNKNOWN ALCOHOL	8.36	83.000
	UNKNOWN ACID	12.47	82.000
	UNKNOWN	21.21	81.000
	UNKNOWN	21.42	86.000
	UNKNOWN	21.47	150.000
	UNKNOWN	22.06	950.000

CASE NO: SDG NO:	<del>-</del>			
CAS	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.30	160.000	
	UNKNOWN	4.39	370.000	
	ALDOL CONDENSATION PRODUCT	4.81	100000.000	
:	UNKNOWN ALCOHOL	5.21	150.000	
	UNKNOWN	5.56	2200.000	
	UNKNOWN	6.29	410.000	-
	UNKNOWN ACID	10.35	120.000	
3	UNKNOWN ACID	12.47	140.000	
	UNKNOWN	17.25	100.000	
ILE NAME:	ECMLO.SDG DATE: 11/09/98 TIME: 16:39 CADRE98		PAGE	E: 7

## Semivolatile Analysis Data - SBLKH4 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMLO

CAS IUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION
	3-PENTEN-2-ONE, 4-METHYL-	3.93	96.000
	UNKNOWN	4.30	120.000
	UNKNOWN	4.41	320.000
	ALDOL CONDENSATION PRODUCT	4.81	81000.000
	UNKNOWN ALCOHOL	5.22	88.000
	UNKNOWN	5.57	2000.000
	UNKNOWN	6.30	360.000
	UNKNOWN	6.45	150.000
	UNKNOWN ALCOHOL	8.36	76.000
	UNKNOWN ACID	10.35	80.000
	UNKNOWN ACID	12.47	100.000

ASE NO: DG NO:	26593 ECML0	LABORATORY: IEA-NJ		
CAS UMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	
	3-PENTEN-2-ONE, 4-METHYL-	3.93	120.000	
	UNKNOWN	4.29	260,000	
	UNKNOWN	4.44	340.000	
	ALDOL CONDENSATION PRODUCT	4.82	87000.000	
	UNKNOWN	4.85	17000.000	
	UNKNOWN ALCOHOL	5.22	120.000	
	UNKNOWN	6.30	420.000	
	UNKNOWN	6.45	97.000	-
	UNKNOWN ALCOHOL	8.36	96.000	
	UNKNOWN ACID	10.35	100.000	
	UNKNOWN ACID	12.47 22.22	110.000 83.000	
	UNKNOWN	28.68	120.000	
	UNKNOWN	29.08	91.000	

CAS IUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION
	3-PENTEN-2-ONE, 4-METHYL-	3.93	120.000
	UNKNOWN	4.30	270.000→
	UNKNOWN	4.48	320,000
	ALDOL CONDENSATION PRODUCT	4.80	79000.000
	UNKNOWN ALCOHOL	5.23	150.000
	UNKNOWN	5.58	3000.000
	UNKNOWN	6.09	83.000
	UNKNOWN	6.31	550.000
	UNKNOWN	6.45	220.000
	UNKNOWN ALCOHOL	8.36	120.000
	UNKNOWN ACID	12.47	110.000
	UNKNOWN ACID	15.71	110.000
	UNKNOWN ACID	19.81	120.000
	UNKNOWN	21.23	73.000
	UNKNOWN	22.01	220.000
	UNKNOWN CARBOXYLIC ACID	22.55	93.000
	UNKNOWN CARBOXYLIC ACID	23.39	74.000
	UNKNOWN	25.76	73.000
	UNKNOWN	29.08	250.000
	UNKNOWN	31.40	95.000

Semivolatile Analysis Data - ECMK8 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMLO LABORATORY: IEA-NJ

AS UMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION Q
	UNKNOWN	3.15	430.000
	UNKNOWN ALCOHOL	4.13	450.000
	UNKNOWN	4.40	300.000
	ALDOL CONDENSATION PRODUCT	4.84	40000.000
	UNKNOWN	. 5.60	1200.000
	UNKNOWN ALCOHOL	6.35	240.000
	UNKNOWN ACID	15.63	92.000
	UNKNOWN ACID	15.78	380.000
	UNKNOWN PAH	15.86	120.000
	UNKNOWN PAH	16.04	85.000
	UNKNOWN	17.57	75.000
	UNKNOWN PAH	17.75	500.000
	UNKNOWN PAH	18.40	110.000
	UNKNOWN PAH	19.78	160.000
	UNKNOWN ALCOHOL	22.34	390.000
	UNKNOWN PAH	23.22	140.000
	UNKNOWN PAH	23.79	1100.000
	UNKNOWN PAH	24.22	410.000
	UNKNOWN	25.69	190.000
	UNKNOWN	25.93	140.000
	UNKNOWN	26.68	- 180.000
	UNKNOWN PAH	27.84	460.000
-	UNKNOWN	28.00	260.000
	UNKNOWN PAH	28.54	170.000
	UNKNOWN PAH	28.86	300.000
	UNKNOWN PAH	.30.26	830.000
FILE NAME	: ECMLO.SDG DATE: 11/09/98 TIME: 16:39 CADRE98		PAGE: 1

Semivolatile Analysis Data - ECMK9 Tentatively Identified Compounds

CASE NO: 26593

CAS	COMPOUND		ESTIMATED
NUMBER	NAME	RT	CONCENTRATION
	UNKNOWN	3.14	210.000
	UNKNOWN ALCOHOL	.4.12	180.000
	UNKNOWN	4.40	260.000
	ALDOL CONDENSATION PRODUCT	4.83	34000.000
	UNKNOWN	5.59	980.000
	UNKNOWN ALCOHOL	6.34	210.000
*	UNKNOWN ACID	15.77	220.000
	UNKNOWN PAH	15.86	81.000
	UNKNOWN PAH	16.04	86.000
	UNKNOWN	17.57	140.000
	UNKNOWN ACID	19.02	110.000
	UNKNOWN	20.04	80.000→
	UNKNOWN	20.59	79.000
	UNKNOWN	21.88	81.000
	UNKNOWN ALCOHOL	22.34	270.000
	UNKNOWN PAH	22.54	990.000
	UNKNOWN PAH	23.20	200.000
	UNKNOWN PAH	23.76	270.000
	UNKNOWN PAH	24.21	190.000
	UNKNOWN PAH	28.98	130.000
	UNKNOWN PAH	30.23	130.000

Semivolatile Analysis Data - ECMM7 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMLO

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	c
	UNKNOWN	4.36	340.000	
	ALDOL CONDENSATION PRODUCT	4.82	42000.000	
	UNKNOWN ALCOHOL	5.25	93.000	
	UNKNOWN	5.60	1200.000	
	UNKNOWN ALCOHOL	6.34	260.000	
	UNKNOWN AROMATIC	7.40	140.000	
	UNKNOWN ACID	10.22	78.000	
	UNKNOWN ACID	10.41	110.000	
	UNKNOWN ACID	12.53	73.000	
	UNKNOWN ALCOHOL	13.74	76.000	
	UNKNOWN ACID	15.77	410.000	
	UNKNOWN	16.21	89.000	
	UNKNOWN PAH	16.69	300.000	
	UNKNOWN ACID	17.23	290.000	
	UNKNOWN PAH	17.31	110.000	
	UNKNOWN ACID	17.37	260.000	
	UNKNOWN ALCOHOL	17.56	690.000	
	UNKNOWN ALCOHOL	17.71	87.000	
	UNKNOWN PAH	18.29	160.000	
	UNKNOWN	18.73	99.000	
	UNKNOWN	18.81	170.000	
	UNKNOWN ACID	19.01	540.000	
	UNKNOWN	2 <b>1.8</b> 6	320.000	
	UNKNOWN ALCOHOL	22.33	130.000	
	UNKNOWN	22.46	180.000	
	UNKNOWN	22.52	140.000	
	UNKNOWN	23.17	130.000	
	UNKNOWN ALCOHOL	28.49	89.000	
	UNKNOWN	29.41	87.000	
	UNKNOWN	29.49	110.000	
	UNKNOWN ALCOHOL	30.22	500.000	
	UNKNOWN	30.34	100.000	
	UNKNOWN	30.53	240.000	
	UNKNOWN AROMATIC	31.41	170.000	

Semivolatile Analysis Data - ECMM6 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMLO

CAS UMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION
	UNKNOWN	4.42	200.000
	ALDOL CONDENSATION PRODUCT	4.84	47000.000
	UNKNOWN ALCOHOL	5.25	100.000
	UNKNOWN	5.60	1400.000
	UNKNOWN ALCOHOL	6.35	280.000
	UNKNOWN ALCOHOL	6.49	95.000
	UNKNOWN ACID	10.22	88.000
	UNKNOWN ACID	12.54	75.000
	UNKNOWN ACID	15.77	260.000
	UNKNOWN ALCOHOL	17.04	150.000
	UNKNOWN PAH	17.25	130.000
	UNKNOWN ACID	17.37	95.000
	UNKNOWN	17.57	330.000
	UNKNOWN	18.72	120.000
	UNKNOWN	18.81	78.000
	UNKNOWN ACID	19.01	260.000
	UNKNOWN	21.86	330.000
	UNKNOWN ALCOHOL	22.34	170.000
	UNKNOWN	22.53	670.000
	UNKNOWN ALCOHOL	23.16	590.000
	UNKNOWN	24.82	140.000
	UNKNOWN ALCOHOL	25.68	100.000
	UNKNOWN KETONE	25.91	85.000
•	UNKNOWN	27.98	100.000
	UNKNOWN	28.47	88.000
	UNKNOWN	29.43	74.000
	UNKNOWN ALCOHOL	30.23	570.000
	UNKNOWN KETONE	31.21	87.000
	UNKNOWN	31.42	95.000

#### Semivolatile Analysis Data - ECML7 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMLO

593 LABORATORY: IEA-NJ

CAS NUMBER	COMPOUND NAME	RŤ	ESTIMATED CONCENTRATION
	UNKNOWN	4.40	270.000
	ALDOL CONDENSATION PRODUCT	4.84	34000.000
	UNKNOWN ALCOHOL	5.27	80.000
	UNKNOWN	5.62	1000.000
	UNKNOWN ALCOHOL	6.37	210.000
	UNKNOWN ALCOHOL	6.52	88.000
	UNKNOWN ACID	10.24	98.000
	UNKNOWN ACID	10.43	140.000
	UNKNOWN ACID	15.78	82.000
	UNKNOWN PAH	18.31	120.000
	UNKNOWN ALCOHOL	19.79	99.000
	UNKNOWN	22.51	81.000
	UNKNOHN	22.55	79.000
	UNKNOWN	28.97	1700.000
	UNKNOWN PAH	29.46	160.000
	UNKNOWN	30.27	150.000

ASE NO: DG NO:		RATORY: IEA-NJ	
CAS UMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION
	UNKNOUN	4.39	310.000
	ALDOL CONDENSATION PRODUCT	4.81	44000.000
	UNKNOWN ALCOHOL	5.25	96.000
	UNKNOWN	5.59	1200.000
	UNKNOWN ALCOHOL	6.33	240.000
	UNKNOWN ACID	10.22	99.000
	UNKNOWN ACID	15.77	120.000
	UNKNOWN ACID	17.57	350.000
	UNKNOWN ACID	19.00	280.000
	UNKNOWN ALCOHOL	22.33	88.000
	UNKNOWN	28.88	560.000
	UNKNOWN ALCOHOL	30.20	270,000

Semivolatile Analysis Data - ECML9 Tentatively Identified Compounds  CASE NO: 26593 SDG NO: ECMLO				
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN ALCOHOL	4.12	160.000	
	UNKNOWN	4.40	280.000	
	ALDOL CONDENSATION PRODUCT	4.83	36000.000	
	UNKNOWN ALCOHOL	5.25	81.000	
	UNKNOWN	5.60	1000.000	
	UNRROWN ALCOHOL	6.35	210.000	
	UNKNOWN ACID	10.22	120.000	
	UNKNOWN ACID	12.54	92.000	
	UNKNOWN ACID	15.78	270.000	
	UNKNOWN PAH	17.25	110.000	
	UNKNOWN	18.71	80.000	
	UNKNOWN ALCOHOL	22.34	290.000	
	UNKNOWN UNKNOWN	22.53	400.000	
	UNKNOWN	23.17	500.000	
	UNKNOWN KETONE	24.81 25.92	130.000 82.000	
	UNKNOWN KETONE	30.22	340.000	
	UNKNOWN AROMATIC	31.40	76.000	

Semivolatile Analysis Data - ECML5 Tentatively Identified Compounds

LABORATORY: IEA-NJ

COMPOUND **ESTIMATED** 'AS Q HBER RT CONCENTRATION NAME 340.000 4.11 UNKNOWN ALCOHOL UNKNOWN 4.38 260.000 4.83 32000.000 ALDOL CONDENSATION PRODUCT UNKNOWN 5.62 950.000 200.000 6.37 UNKNOWN ALCOHOL UNKNOWN ALCOHOL 6.53 84.000 120.000 10.44 UNKNOWN ACID UNKNOWN ACID 12.55 73.000 UNKNOWN ACID 15.78 88.000 17.29 UNKNOWN PAH 230.000 20.10 430.000 UNKNOWN ACID 21.95 210.000 UNKNOWN UNKNOWN 22.56 160,000 23.37 92.000 UNKNOWN ALCOHOL UNKNOWN 23.62 82.000 25.18 UNKNOWN 87.000 UNKNOWN 26.20 360.000 27.26 91.000 UNKNOWN PAH UNKNOWN 27.46 370,000 130.000 29.21 UNKNOWN UNKNOWN PAH 29.44 160.000 30.30 130.000 UNKNOWN ALCOHOL

> Semivolatile Analysis Data - ECML6 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMLO

FILE NAME: ECMLD.SDG DATE: 11/09/98 TIME: 16:39 CADRE98

CASE NO: 26593

SDG NO: ECMLO

LABORATORY: IEA-NJ

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. . .

:AS UMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.43	260.000	
	ALDOL CONDENSATION PRODUCT	4.85	34000.000	
	UNKNOWN ALCOHOL	5.27	83.000	
	UNKNOWN	5.63	1000.000	
	UNKNOWN ALCOHOL	6.37	210.000	
	UNKNOWN ALCOHOL	6.52	92.000	
	UNKNOWN ACID	10.26	82.000	
	UNKNOWN ACID	10.44	120.000	
	UNKNOWN ACID	15.78	86.000	
	UNKNOWN	22.00	100.000	
	UNKNOWN PAH	28.96	410.000	
****	UNKNOWN ALCOHOL	30.27	130.000	

Semivolatile Analysis Data - ECML3 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMLO LABORATORY: IEA-NJ

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	3.18	520.000	
	UNKNOWN ALCOHOL	4.10	1100.000	
	UNKNOWN	4.30	96.000	
	UNKNOWN	4.38	240.000	
	ALDOL CONDENSATION PRODUCT	4.83	33000.000	
	UNKNOWN ALCOHOL	5.28	97.000	
	UNKNOWN	5.62	950.000	
	UNKNOWN ALCOHOL	6.37	180.000	
	UNKNOWN ACID	10.25	95.000	
	UNKNOWN ACID	10.44	160.000	
	UNKNOWN	11.43	90.000	
	UNKNOWN ACID	15.78	81.000	
	UNKNOWN KETONE	16.30	190.000	
	UNKNOWN	16.71	120.000	
	UNKNOWN KETONE	. 16.88	91.000	
	UNKNOWN	17.35	210.000	
	UNKNOWN PAH	18.31	500.000	
	UNKNOWN ALCOHOL	18.68	140.000	
	UNKNOWN	18.94	280.000	
	UNKNOWN	19.09	89.000	
	UNKNOWN	19.70	110.000	
	UNKNOWN	22.57	110.000	
	UNKNOWN	23.12	120.000	
	UNKNOWN	24.83	82.000	
	UNKNOWN	25.18	110.000	
	UNKNOWN PAH	26.19	170.000	
	UNKNOWN ALCOHOL	27.46	180.000	
	UNKNOWN PAH	29.21	100.000	
	UNKNOWN	29.42	130.000	
	UNKNOWN	30.37	310.000	
ILE NAME	: ECMLO.SDG DATE: 11/09/98 TIME: 16:39 CADRE98	·	PAGE:	

Semivolatile Analysis Data - ECML4 Tentatively Identified Compounds CASE NO: 26593 LABORATORY: IEA-NJ SDG NO: ECML0				
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN ALCOHOL	4.12	730.000	
	UNKNOWN	4.39	240.000	
	ALDOL CONDENSATION PRODUCT	4.84	30000.000	
	UNKNOWN ALCOHOL	5.27	72.000	
	UNKNOWN	5.63	890.000	
	UNKNOWN ALCOHOL	6.37	200.000	
	UNKNOWN ALCOHOL	6.52	86.000	
	UNKNOWN AROMATIC	7.43	80.000	
	UNKNOWN ACID	10.44	89.000	
	UNKNOWN ACID	15.79	100.000	
	UNKNOWN	20.79	260.000	
	UNKNOWN	22.75	3400.000	
	UNKNOWN PAH	23.77	130.000	
	UNKNOWN	24.56	84.000	
	UNKNOWN	25.16	88.000	
	UNKNOWN	26.18	98.000	
	UNKNOWN PAH	27.45	88.000	
	UNKNOWN	30.27	160.000	
ILE NAME	: ECMLO.SDG DATE: 11/09/98 TIME: 16:39 CADRE98		PAGE:	

Semivolatile Analysis Data - ECML1 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMLO

LABORATORY: IEA-NJ

AS MBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN ALCOHOL	4.16	470.000	
	UNKNOWN	4.41	270.000	
	ALDOL CONDENSATION PRODUCT	4.85	34000.000	
	UNKNOWN ALCOHOL	5.29	82.000	
	UNKNOWN	5.63	1000.000	
	UNKNOWN ALCOHOL	6.37	220.000	
	UNKNOWN ALCOHOL	6.52	100.000	
1	UNKNOWN ACID	10.26	120.000	
	UNKNOWN ACID	10.43	180.000	
	UNKNOWN ACID	12.55	97.000	
	UNKNOWN ACID	15.79	90.000	
	UNKNOWN PAH	16.07	95.000	
	UNKNOWN ALCOHOL	22.36	130.000	
	UNKNOWN	22.49	120.000	
	UNKNOWN	23.01	180.000	
	UNKNOWN PAH	23.79	250.000	
	UNKNOWN PAH	24.22	120.000	
	UNKNOWN PAH	30.25	85.000	
	UNKNOWN	30.29	92.000	
	UNKNOWN	30.88	640.000	
T'LE NAME	: ECMLO.SDG DATE: 11/09/98 TIME: 16:39 CADRE98		PAGE	: 3

Semivolatile Analysis Data - ECML2 Tentatively Identified Compounds LABORATORY: IEA-NJ

CASE NO: 26593 SDG NO: ECMLO

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION -Q
y -	UNKNOWN	3.18	290.000
<b>.</b> .	UNKNOWN ALCOHOL	4.11	740.000
	UNKNOWN	4.40	240.000
	ALDOL CONDENSATION PRODUCT	4.83	29000.000
	UNKNOWN	5.62	880.000
•	UNKNOWN ALCOHOL	6.37	180.000
	UNKNOWN ACID	10.44	120.000
	UNKNOWN ACID	15.79	100.000
	UNKNOWN PAH	15.88	130.000
	UNKNOWN PAH	16.06	240.000
	UNKNOWN PAH	16.93	190.000
	UNKNOWN PAH	17.13	100.000
	UNKNOWN PAH	18.20	100.000
	UNKNOWN PAH	18.43	170.000
	UNKNOWN PAH	19.81	110.000
	UNKNOWN PAH	20.50	74.000
	UNKNOWN PAH	21.16	88.000
	UNKNOWN PAH	23.26	230.000
	UNKNOWN PAH	23.81	760.000→
	UNKNOWN PAH	24.25	400.000
	UNKNOWN	25.18	140.000
	UNKNOWN PAH	27.88	330.000
	UNKNOWN PAH	28.90	220.000
	UNKNOWN PAH	29.05	300.000
	UNKNOWN PAH	30.35	230.000
FILE NAME	: ECMLO.SDG DATE: 11/09/98 TIME: 16:39 CADRE98		PAGE: 4

Semivolatile Analysis Data - SBLKH1 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMLO

LABORATORY: IEA-NJ

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION C
	UNKNOWN ALCOHOL	4.19	180.000
	UNKNOWN	4.43	360.000
	ALDOL CONDENSATION PRODUCT	4.86	43000.000
	UNKNOWN ALCOHOL	5.27	109.000
	UNKNOWN	5.63	1400.000
	UNKNOWN ALCOHOL	6.37	300.000
	UNKNOWN ALCOHOL	6.52	140.000
	UNKNOWN ACID	10.44	100.000
	UNKNOWN .	17.46	73.000
	UNKNOWN	18.73	100.000
	UNKNOWN ALCOHOL	22.36	130.000

Semivolatile Analysis Data - ECMLO Tentatively Identified Compounds

CASE NO: 26593

LABORATORY: IEA-NJ

CAS UMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	۵
	UNKNOWN	3.19	110.000	
	UNKNOWN ALCOHOL	4.12	680.000	
	UNKNOWN	4.41	220.000	
	ALDOL CONDENSATION PRODUCT	4.84	29000.000	
	UNKNOWN	5.63	890.000	
	-UNKNOWN ALCOHOL	6.37	180.000	
	UNKNOWN ACID	10.44	120.000	
	UNKNOWN	12.48	140.000	
	UNKNOWN	15.60	87.000	
	UNKNOWN ACID	15.79	67.000	
	UNKNOWN PAH	16.09	110.000	
	UNKNOWN PAH	18.43	110.000	
	UNKNOWN PAH	20.56	82.000	
	UNKNOWN PAH	23.25	120.000	
	UNKNOWN PAH	23.80	410.000	
	UNKNOWN PAH	24.25	270.000	
	UNKNOWN PAH	27.84	130.000	
	UNKNOWN PAH	29.03	180.000	
	UNKNOWN PAH	30.31	160.000	
	UNKNOWN	31.36	4400.000	

# CADRE Data Qualifier Sheet

<u>Qualifiers</u>	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
Ј	The anlayte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present)
Н	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

Case Number: 26593

Site Name: Himco Dump (IN)

SDG Number: ECML0 Laboratory: AEN (IEA)

Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

### ECMN7

Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

## 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

# 12. ADDITIONAL INFORMATION ECML0-9, ECMM6-7, ECMK8-9, ECMN0-4, ECMN7

Below is the summary of the pH for the samples of this dataset:

Sample ID	pН
ECML0 ECML1 ECML2 ECML3 ECML4 ECML5	7.3 7.0 7.6 7.6 7.8 7.9
ECML6 ECML7 ECML8 ECML9 ECMM6 ECMM7 ECMK8 ECMK8	6.1 6.0 6.3 5.7 5.6 5.5 7.2 7.7
ECMN0 ECMN1 ECMN2 ECMN3 ECMN4 ECMN7	5.4 5.1 4.9 4.7 6.8 6.6

No flags were entered for the SVOA TIC results for the CADRE report. Please refer to Form I SVOA for the final flags f the SVOA TIC results.

No method blank reports were printed out.

Prepared By: Steffanie Tobin (Lockheed/ESAT)

Date: November 16, 1998

se Number : 26593

orte Name: Himco Dump (IN)

SDG Number: ECML0 Laboratory: AEN (IEA)

#### ECML0

Naphthalene, Acenaphthylene, Phenanthrene, Anthracene, Benzo(a)anthracene, Chrysene, Benzo(k)fluoranthene, Dibenz(a,h)anthracene

### ECML1

Phenanthrene, Anthracene, Carbazole, Benzo(a)anthracene, Chrysene, Benzo(k)fluoranthene Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

#### ECML2

Naphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene Fluorene, Anthracene, Carbazole, Benzo(k)fluoranthene, Dibenz(a,h)anthracene

#### ECML3

Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

#### ECML/:

Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

#### ECML4MS

Naphthalene, Dimethylphthalate, Phenanthrene, Anthracene Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene

### ECML4MSD

Phenanthrene, Fluoranthene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

## ECML5

Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

# ECML6, ECML7, ECML8, ECMM6 Benzo(g,h,i)perylene

# ECMN2, SBLKH1 bis(2-Ethylhexyl)phthalate

### ECMN0. ECMN1

bis(2-Ethylhexyl)phthalate, Di-n-octylphthalate

#### ECMN4

Fluoranthene, Pyrene, Butylbenzylphthalate, Benzo(a)anthracene Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(a)pyrene

Prepared By: Steffanie Tobin (Lockheed/ESAT)

Date: November 16, 1998

Case Number: 26593

Site Name: Himco Dump (IN)

SDG Number: ECML0 Laboratory: AEN (IEA)



### 8. INTERNAL STANDARDS

The following volatile samples have internal standard area counts that are outside the lower limit of primar criteria. Hits are qualified "J" and non-detects are qualified "UJ".

### ECMN7, ECMN7RE

Chloromethane, Bromomethane, Vinyl Chloride, Chloroethane

Methylene Chloride, Acetone, Carbon Disulfide, 1,1-Dichloroethene

- 1,1-Dichloroethane, 1,2-Dichloroethene (total), Chloroform, 1,2-Dichloroethane
- 2-Butanone, 1,1,1-Trichloroethane, Carbon Tetrachloride, Bromodichloromethane
- 1,2-Dichloropropane, cis-1,3-Dichloropropene, Trichloroethene, Dibromochloromethane
- 1.1.2-Trichloroethane, Benzene, trans-1,3-Dichloropropene, Bromoform

The following volatile samples have internal standard area counts outside expanded criteria. Hits are  $\epsilon$  "J" and non-detects are qualified "R".

## ECMN7, ECMN7RE

4-Methyl-2-Pentanone, 2-Hexanone, Tetrachloroethene, 1,1,2,2-Tetrachloroethane Toluene, Chlorobenzene, Ethylbenzene, Styrene, Xylene (total)

# 9. COMPOUND IDENTIFICATION



After reviewing the mass spectra and chromatograms, it appears that all VOA and SVOA compounds were properly identified.

# 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following volatile samples have analyte concentrations below the quantitation limit (CRQL). All result below the CRQL are qualified "J".

VBLKE2

Methylene Chloride

The following semivolatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

#### ECMK8

Acenaphthene, Phenanthrene, Anthracene, Carbazole, Dibenz(a,h)anthracene

#### ECMK9

Phenanthrene, Anthracene, Benzo(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

Prepared By: Steffanie Tobin (Lockheed/ESAT)

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SDG Number: ECML0 se Number: 26593 te Name: Himco Dump (IN) Laboratory: AEN (IEA)

elevated to the CRQL. Hits are qualified "U" and non-detects are not flagged.

bis(2-Ethylhexyl)phthalate ECML0, ECML1, ECML2, ECML3, ECML4, ECML6, ECML7, ECML8, ECML9, ECMM6

### 5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The following volatile samples have system monitoring compound recoveries above the upper limit of the criteria window. Hits are qualified "J" and non-detects are qualified as in section 8.

ECMN7RE

The following volatile samples have system monitoring compound recoveries above the upper limit of the teria window. Hits are qualified "J" and non-detects are qualified below.

ECMN7

Fig. The following volatile samples have one or more system monitoring compound recovery values below the lower limit of the criteria window. Hits are biased low and qualified "J" and non-detects are qualified "UJ". Howeve the non-detect was flagged as "R" under other qualification, then the "R" flag will be the final flag.

ECMN7

The following semivolatile samples have one surrogate compound recovery outside the QC window. Hits an non-detects are not qualified since the protocol allows at least one surrogate to be out of control before a reanalysis qualification is required.

ECMN7

# 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The relative percent difference (RPD) between the following semivolatile matrix spike and matrix spike duplicate recoveries is outside criteria. Hits are qualified "J" and non-detects are qualified "UJ" for the unspiked sample.

ECML4MS. ECML4MSD Acenaphthene

#### 7. FIELD BLANK AND FIELD DUPLICATE

None of the samples in this data set are field blanks or field duplicates.

Prepared By: <u>Steffanie Tobin (Lockheed/ESAT)</u>

Date: November 16, 1998

Case Number: 26593

Site Name: Himco Dump (IN)

SDG Number: ECML0 Laboratory: AEN (IEA)



#### 1. HOLDING TIME

No problems were found for this qualification.

# 2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

No problems were found for this qualification.

#### 3. CALIBRATION

The following volatile samples are associated with a continuing calibration whose corresponding initial calibration has percent relative standard deviation (%RSD) outside primary criteria. Hits are qualified "J" and non-detects are flagged "UJ".

Bromomethane, 2-Butanone VBLKE2, VHBLKE1

Ch.loroethane

ECMK8, ECMK9, ECML0, ECML1, ECML2, ECML3, ECML4, ECML4MS, ECML4MSD ECML5, ECML6, ECML7, ECML8, ECML9, ECMM6, ECMM7, ECMN0, ECMN1 ECMN2, ECMN3, ECMN4, ECMN7, ECMN7RE, VBLKE1

The following volatile samples are associated with a continuing calibration percent difference (%D) outsid primary criteria. Hits are qualified "J" and non-detects are qualified "UJ". However, if the non-detect was flagged "R" under other qualification, then the "R" flag will be the final flag.

Trichloroethene, Tetrachloroethene ECMK8, ECMK9, ECML0, ECML1, ECML2, ECML3, ECML4, ECML4MS, ECML4MSD, ECML5, ECML6, ECML7, ECML8, ECML9, ECMM6, ECMM7, ECMN0, ECMN1 ECMN2, ECMN3, ECMN4, ECMN7, ECMN7RE, VBLKE1

1,1,2,2-Tetrachloroethane VBLKE2, VHBLKE1

The following semivolatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

4-Chloroaniline, Di-n-butylphthalate ECMK8, ECMK9, ECML8, ECML9, ECMM6, ECMM7

## 4. METHOD BLANKS

The following semivolatile samples have analyte concentrations reported below the CRQL and less tequal to ten times (10X) the associated method blank concentration. Reported sample concentrations have been

Prepared By: Steffanie Tobin (Lockheed/ESAT)

Date: November 16, 1998

se Number : 26593 e Name: Himco Dump (IN) SDG Number: ECML0 Laboratory: AEN (IEA)

# Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twenty soil samples (ECML0-9, ECMM6-7, ECMK8-9, ECMN0-4, ECMN7) were collected on 10/19-20/98. The lab received the samples on 10/20-21/98 in good condition. All samples were analyzed for the list of VO4 and SVOA analytes. All samples were analyzed according to CLP SOW OLMO3.2 3/90.

Prepared By: Steffanie Tobin (Lockheed/ESAT)

Date: November 16, 1998

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	.~
SUBJECT:	Review of Data  Received for Review on November 9, 1998
FROM:	Stephen L. Ostrodka, Chief (SRT-4J) for the Ostrodka, Superfund Technical Support Section  Data User: USACE
TO:	Data User: <u>USACE</u>
We have reviewed the data	for the following case:
Site name: Himco Dump	(IN)
Case number: 26593	SDG Number: <u>ECML0</u>
Number and Type of Samp	oles: 20 soil samples
Sample Numbers: <u>ECML0</u>	-9, ECMM6-7, ECMK8-9, ECMN0-4, ECMN7
Laboratory: AEN (IEA)	Hrs. for Review:
Following are our findings:	
He data one s	walk and acceptable with the
Milisatin	described in the attacked warration
Mound	

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

# ESD Central Regional Laboratory Data Tracking Form for Contract Samples

Data Set No:	CERCLIS No: /N/054J
Case No: <u>26593</u>	Site Name Location: Hinco Dany
Contractor or EPA Lab: <u>IEA</u>	Data User: <u>USACE</u>
No. of Samples: 4 Date	Sampled or Data Received: 11-18-98
of-custody record? Yes / N	g lists been received? Yes No No No No No No No No No No No No No
Are basic data forms in? Yes No of samples claimed: 4 No	No
Received by: Lynthe	Ournes Date: 11-18-98
Received by LSSS: Light	te Burnetbate: 11-18-98
Review started: 11/29/44	Reviewer Signature: Many John
Total time spent on review:	6.0 Date review completed: 11/24/
Copied by: Synette	Burnetto Date: 12-15-98
Mailed to user by: Sypette	te Burned Date: 12-15-98
DATA USER: Please fill in the blanks bel	
Data received by:	Date:
Data review received by:	Date:
Organic Data Complete [ ] Dioxin Data Complete [ ] SAS Data Complete [ ]	Suitable for Intended Purpose [ ] / if Suitable for Intended Purpose [ ] / if Suitable for Intended Purpose [ ] / if Suitable for Intended Purpose [ ] / if asons why data are not suitable for y
Descrived by Data Mark Consider	
Received by Data mgmt. Coordin	nator for Files. Data:

Sample Number:	ECMQ5		ECMQ5MS		ECMQ5MSD					
Sampling Location:	WT119A		WT119A		WT119A		1		l	
Matrix:	Water		Water		Water				I	
Units:	ug/L		ug/L		ug/L					
Date Sampled:	10/22/98		10/22/98		10/22/98		1		1	
%Moisture:	1				1		1		1	
PH:			}		1					
Dilution Factor:	1.0		1.0		1.0		!			
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	10_	- <u>U</u>	34_		36_					
2.4-Dinitrophenol	1 _25_	_U	_25_	_U	25_	_U	1		l	
4-Nitrophenol	_25_	_U	42_		_64_		I			
Dibenzofuran	_10_	_U	1 _10_	_U	[ _10_	_U	1			
2.4-Dinitrotoluene	_10_	_U	_38_		_38_		1			
Diethylphthalate	! _10_	_U	_10_	_U	1 _10_	_U	1			
4-Chlorophenyl-phenylether	_10_	_U	_10_		1 _10_					
Fluorene	_10_		10_	_U	1 _10_					
4-Nitroaniline	_25_	_U	25_	U	_25_	U				
4.6-Dinitro-2-methylphenol	_25_	_U	! _25_		25_					
N-Nitrosodiphenylamine	_10_		10_	U		_U			1	
4-Bromophenyl-phenylether	_10_	_U	_10_	_U		_U				
Hexachlorobenzene	_10_	_U	_10_			_U	1			
Pentachlorophenol	_25_	_U	_59_		69_		1			
Phenanthrene	_10_	_U	_10_	_U	1_10_	_U	1			
Anthracene	1_10_	U	_10_		1 _10_	U	1			
Carbazole	_10_	U	1_10_	U	10_				i ——	
Di-n-butylphthalate	1_10_		1 10	_w	1 _10_				; ——	
Fluoranthene	1_10_		1 _10_		10_	_U				
Pyrene	10_		1_40_		39_					
Butylbenzylphthalate	1_10_	_U	10_	_U	10_	<u> </u>				
3.3'-Dichlorobenzidine	1 _10_		10_	U		-7 U	1			
Benzo(a)anthracene	1_10_	_U	10_	U						
Chrysene	1_10_		1 _10_		1 _10_					
bis(2-Ethylhexyl)phthalate	1_10_		1 _10_				1			
Di-n-octylphthalate	1_10_		1_10_				1		1	
Benzo(b) fluoranthene			1_10_		1 _10_		· —		· —	
Benzo(k)fluoranthene	1 _10_	_U			10_					
Benzo(a)pyrene	1 _10_	_ <u></u> U	1 _10_	_U	10_		1		1	
Indeno(1.2.3-cd)pyrene	_10_	, _U		<sup>U</sup>	_10_	_U			1	
Dibenz(a.h)anthracene	1 _10_	, _U		_U	_10_	-"			i	
Benzo(g.h.i)perylene	1 _10_			- —		-"	! ——			
benzoty, it. Type I y rene	1 _10_		1 -10-	_U	_10_	_U	· ——		1	

# Analytical Results (Qualified Data)

Case #: 26593

SDG: ECMQ5

IEANJ

Site:

HIMCO DUMP, ELKHART

Lab. : Reviewer: Date:

Date:										
Sample Number:	ECMQ5		ECMQ5MS	-	ECMQ5MSD					
Sampling Location:	WT119A		WT119A		WT119A				i	
Matrix:	Water		Water		Water					
Units:	ug/L		ug/L		ug/L				1	
Date Sampled:	10/22/98		10/22/98		10/22/98		1		1	
%Moisture:	1		1		1					
PH:	I		1		1		!			
Dilution Factor:	1.0		1.0		1.0				!	
Semivolatile Compound	Result	Flag	Result	- <del></del> Flag	Result	Flag	Result	Flag	Result	Flag
Phenol	10_	- <u>-</u> U	50_		1_61_					
bis(2-Chloroethyl)ether	_10_	_U	_10_	_U	10_	_U			١	
2-Chlorophenol	[ _10_	_U	_55_		_59 <b>_</b>		1		١	
1.3-Dichlorobenzene	1 _10_	_U	10_	_U	10_	_U				
1.4-Dichlorobenzene	1 _10_	_U	_30_		_29_		l		l	
1.2-Dichlorobenzene	1_10_	_U	_10_	_U	10_	_U			1	
2-Methylphenol	1_10_	_U	1 _10_	_U	_10_	_U	1			
2.2'-oxybis(1-chloropropane)	_10_	_U	_10_	_U	_10_	_U			1	
4-Methylphenol	1 _10_	U	_10_		1_10_					
N-Nitroso-di-n-propylamine	1_10_	_U	] _34_		32_				1	
Hexachloroethane	10_	_U	10_	_U	1_10_	_U				
Nitrobenzene	1_10_		1 _10_	_U	1_10_	_U				
Isophorone	1_10_	_U	1_10_	_U						
2-Nitrophenol	1_10_	_U	_10_	_U		_U				
2.4-Dimethylphenol	_10_	_U	10_	_U		U	1		1	
bis(2-Chloroethoxy)methane	1_10_	_U	1_10_	_U	_10_	_U				
2.4-Dichlorophenol	1_10_	_U	10_		10_					
1.2.4-Trichlorobenzene	1 _10_	_U	1_32_		34_				1	
Naphthalene	10_		1 _10_	U	_10_	_U				
4-Chloroaniline	_10_	_W	10_	_w		_U	1		1	
Hexachlorobutadiene	j_10_		10_		10_	U	1			
4-Chloro-3-methylphenol	1_10_		_35_		68_				1	
2-Methylnaphthalene	1_10_	_U	1 _10_	U		_U				
Hexachlorocyclopentadiene	1_10_		[ _10_	_U		_U			1	
2.4.6-Trichlorophenol	_10_	_U	_10_	_U	1_10_				1	
2.4.5-Trichlorophenol	1 _25_		_25_		25_				1	
2-Chloronaphthalene	1_10_		1 _10_		1_10	U	1		1	
2-Nitroaniline	25_		25_		25_	_U				
Dimethylphthalate	10_		_10_		1_10_	_U	1		1	
Acenaphthylene	10_		_10_		1_10_				1	
2.6-Dinitrotoluene	1 _10_	U	1 _10_		10_					
3-Nitroaniline	25_	_U	25_		25_				j	
	1	- —	l		l		I		1	



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# Analytical Results (Qualified Data)

Case #: 26593

SDG: ECMQ5

Site:

HIMCO DUMP, ELKHART IEANJ

Lab. : Reviewer: Date:

Sample Number:	ECMR1						Ī		Ī	
Sampling Location:	WT119A		1		1		!		1	
Matrix:	Water		1						1	
Units:	ug/L	-	1						1	
Date Sampled:	10/22/98								1	
%Moisture:										
PH:	1								1	
Dilution Factor:	1.0									
Volatile Compound	Result	Flag	Result	- Flag	Result	Flag	Result	Flag	Result	- Flag
Chloromethane	10_	- <u>_U_</u>								
Bromomethane	_10_	_W	1				1		1	
Vinyl Chloride	] _10_	_U	1				1			
Chloroethane	10_	_U	1		i		1		1	
Methylene Chloride	10_	_U	1							
Acetone	10_	_U	1						i	
Carbon Disulfide	10_	_U	1		1				i	
1.1-Dichloroethene	10_	_U	1				1			
1.1-Dichloroethane	[ _10_	_U	1		l		1			
Total 1.2-Dichloroethene	10_	_U	1				1			
Chloroform	_10_	_U	1				1		-	
1.2-Dichloroethane	1 _10_	_U			1		1		1	
2-Butanone	[ _10_	_W	1		1		1			
1.1.1-Trichloroethane	_10_	_U	1		l		1			
Carbon Tetrachloride	_10_	_U	l		l		l		!	
Bromodichloromethane .	_10_	_U	1		ł					
1.2-Dichloropropane	_10_	_U	1		1					
Cis-1.3-Dichloropropene	_10_	_U	11		l				1	
Trichloroethene	_10_	_U			l				1	
Dibromochloromethane	_10_	_U	1		1		1		1	
1.1.2-Trichloroethane	1_10_	_U	1		1					
Benzene	10_	_U	1							
Trans-1.3-Dichloropropene	1_10_	_U	l				1		1	
Bromoform	10_	U	1						i	
4-Methyl-2-pentanone	10_	_U	1						i	
2-Hexanone	ļ. <u>10</u>	_U	1				1			
Tetrachloroethene	[ _10_	_U	1		1		1			
1.1.2.2-Tetrachloroethane	1_10_	_U			1		1			
Toluene	1 10	U							i	
Chlorobenzene	1_10_								i —	
Ethylbenzene	j _10_				i					
Styrene	10_	U								
Xylene (total)	10	_U			i				i —	

## Analytical Results (Qualified Data)

Case #: 26593

Site: Lab. : Reviewer: Date: SDG: ECMQ5

HIMCO DUMP, ELKHART

IEANJ

Sample Number:	ECMQ5		ECMQ5MS		ECMQ5MSD		ECMQ9		ECMRO	
Sampling Location:	WT119A		WT119A		WT119A		WT119A		TRIP BLANK	
Matrix:	Water		Water		Water		Water		Water	
Units:	l ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled:	10/22/98		10/22/98		10/22/98		10/22/98		10/22/98	
%Moisture.	į		i		İ		i		Ī	
PH:	i						i		1	
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Chloromethane	10_	U	10_	- <u>-</u> U	10_	- <u>-</u> _U	10_	<u> </u>	1 _10_	R
Bromomethane	_10_	_UJ	10_	_UJ	10_	_UJ	10_	_W	10_	_R
Vinyl Chloride	[ _10_	_U '	10_	_U	10_	_U	1 _10_	_U	10_	_R
Chloroethane	10_	_U	10_		1 10	U	10_	_U	[ _10_	_R
Methylene Chloride	[ _10_	_U	10_	_U	10_	_U	10	_U	10	R
Acetone	[ 10]	U	10_	_U	10	_U	10_	_U	10	R
Carbon Disulfide	10_	U	10_	_U	10_	U	j _10_		10_	_R
1.1-Dichloroethene	i _10_	U	44	- —	44		1 _10_		10_	R
1.1-Dichloroethane	10	_U	i _10_	U_	i _10_	_U_	10_	U	10	_R
Total 1.2-Dichloroethene	10_		10_	_U	10_	_U	10_	_U	10_	_R
Chloroform	10_		10		10	U	10_	- U	10	-R
1.2-Dichloroethane	10_	_U	10_		10_	_U	10_	_U	1 _10_	R
2-Butanone	1 _10_	_nn	10_	_W	10_	_w	10_	_w	10	_R
1.1.1-Trichloroethane	1 _10_		10_	_U	10_	_0	10_	_U	110_	
Carbon Tetrachloride	1_10_		10_	-U	1 _10_	_U	1_10_		10_	_:` <u></u> _R
Bromodichloromethane	10_	- <u>u</u>	10_	_U	1 10	U	1 10	-U	10	-\`R
1.2-Dichloropropane	1 _10_					_U	1 _10_	_U	1_10_	^\`
Cis-1.3-Dichloropropene	10_	_U	_10_   _10_	_U	_10_   _10_		10_		10_	_^` _R
Trichloroethene				_U						
	_10_	_U	1_49_	11	_53_		1 _10_	_U	1 _10_	-R
Dibromochloromethane 1.1.2-Trichloroethane	_10_	_U	_10_	_U	_10_	U	10_	_U	1 _10_	-R
	1 _10_	_!!	_10_	_U	_10_	_U	1 _10_	_U	1 _10_	_R
Benzene	_10_	_U	_47_		_48_		1 _10_	_U	10_	_R
Trans-1.3-Dichloropropene	_10_	_U	_10_		_10_	_U	1_10_		1 _10_*****	_R
Bromoform	_10_	_U	_10_	_U	1_10_	_U	10_	_U	1_10_	_R
4-Methy1-2-pentanone	1_10_	_U	1 _10_	_U	_10_	U	1_10_		10_	-R-
2-Hexanone	_10_	_U	_10_	_U	1 _10_	_U	_10_	_U	10_	-R-
Tetrachloroethene	_10_	_U	_10_	_U	1 _10_	_U	1_10_	_U	10_	_R
1.1.2.2-Tetrachloroethane	1 _10_	_U	1_10_	_U	1_10_		10_	-U	1 _10_	R
Toluene	10_	_U	_46_		_47_		_10_	_U	10_	_R
Chlorobenzene	1 _10_	_U	_52_		1 _50_		10_	~U	_10_	_R
Ethylbenzene	_10_	_U	10	_U	1_10_	_U	_10_	_U	_10_	_R_
Styrene	_10_	_U	1_10_	_U	10_	_U	_10_	_U	_10_	_R
Xylene (total)	_10_	_U	_10_	_U	_10_	_U	_10_	_U	_10_	_R



Case Number: 26593

SDG Number: ECMQ5 Laboratory: IEA-NJ Site Name: Himco Dump (IN)

TICS

CASE NO: SDG NO:				
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	۵
	UNKNOWN ACID UNKNOWN ACID UNKNOWN ACID	10.22 10.42 12.54	3.000 4.000 2.000	
FILE NAME:	ECMQ5.SDG DATE: 11/19/98 TIME: 10:31 CADRE98		PAGE	: 1

	Semivolatile Analysis Data Tentatively Identified Com			
CASE NO: SDG NO:		LABORATORY: IEA-NJ		
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	۵
	UNKNOWN	4.63	3.000	
	BICYCLO[2.2.1] HEPT-5-ENE-2,3-DICARB	16.44	3.000	
	UNKNOWN	17.57	2.000	
	UNKNOWN	21.25	2.000	
ILE NAME:	ECMQ5.SDG DATE: 11/19/98 TIME: 10:31 CADRE98		PAGE!	- 2

ise Number : 26593 Site Name: Himco Dump (IN) SDG Number: ECMQ5 Laboratory: IEA-NJ

# CADRE Data Qualifier Sheet

<u>Qualifiers</u>	<u>Data Qualifier Definitions</u>
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The anlayte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present)
Н	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

Case Number: 26593

SDG Number: ECMQ5 Site Name: Himco Dump (IN) Laboratory: IEA-NJ

TICS

	Semivolatile Analysis Data Tentatively Identified Co	empounds		
CASE NO: SDG NO:		LABORATORY: IEA-NJ		
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN ACID UNKNOWN ACID UNKNOWN ACID	10.22 10.42 12.54	3.000 4.000 2.000	
ILE NAME:	ECMQ5.SDG DATE: 11/19/98 TIME: 10:31 CADRE98		PAGE:	:

	Semivolatile Analysis Data - ECMC Tentatively Identified Compounds					
CASE NO: SDG NO:	26593 LABORATORY: IEA-NJ					
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	a		
	UNKNOWN	4.63	3.000			
	BICYCLO[2.2.1] HEPT-5-ENE-2,3-DICARB	16.44	3.000			
	UNKNOWN	17.57 21.25	2.000 2.000			
ILE NAME:	ECMQ5.SDG DATE: 11/19/98 TIME: 10:31 CADRE98		PAGE:	- 2		

Caga Num

Case Number : 26593

Site Name: Himco Dump (IN)

SDG Number: ECMQ5
Laboratory: IEA-NJ

# CADRE Data Qualifier Sheet

<u>Qualifiers</u>	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The anlayte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present)
H	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

SDG Number: ECMQ5

Case Number: 26593

Site Name: Himco Dump (IN) Laboratory: IEA-NJ



## 12. ADDITIONAL INFORMATION

According to the chain-of-custody, the lab received the sample aliquots for semi-volatile analysis for all samples except the trip blank, but d not perform the semi-volatile analysis for samples ECMQ9 and ECMR1. Th lab did not include the sample tags for the SVOA fraction for samples ECMQ9 and ECMR1 in the data case. There is no record of communication between the lab and any government agency as to what happened to the analysis of the SVOA fraction for the listed samples.

see other cosid. package

Reviewed By: Thomas Sedlacek, Lockheed Martin ESAT

Date: <u>November 30, 1998</u>

se Number: 26593 SDG Number: ECMQ5
Site Name: Himco Dump (IN) Laboratory: IEA-NJ

#### 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The relative percent difference (RPD) between the following semivolatile matrix spike and matrix spike duplicate recoveries is outside criteria. In sample ECMQ5 hits are flagged "J" and non-detects are flagged "UJ".

ECMQ5MS

4-Chloro-3-methylphenol

ECMQ5MSD

4-Chloro-3-methylphenol

The following semivolatile matrix spike/matrix spike duplicate samples have percent recovery outside criteria. Although the recovery exceeded the upper limit, the actual recovery was less than 100% of what was spike therefore no action need to taken for this "out of control condition".

ECMQ5MSD

4-Nitrophenol



According to the chain-of-custody sample ECMQ9 and ECMQ5 are a field duplicate sample pair in this data set. Sample ECMQ5 was analyzed in this data set, sample ECMQ9 was not analyzed in this data set. The reviewer was unable to determine which data set includes the missing sample.

### 8. INTERNAL STANDARDS

No problems found for this qualification.

## 9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms it appears that all VOA, and SVOA compounds were properly identified.

## 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

No problems found for this qualification.

#### 11. SYSTEM PERFORMANCE

GC/MS baselines indicated acceptable performance.

Reviewed By: <u>Thomas Sedlacek, Lockheed Martin ESAT</u>

Date: <u>November 30, 1998</u>

SDG Number: ECMQ5

Case Number: 26593

Site Name: Himco Dump (IN)

Laboratory: IEA-NJ



re

#### 1. HOLDING TIME

The trip blank was "sampled" on November 2, 1998 and analyzed outside of holding time windows. The data for ECMR0 is qualified "R" unusable.

# 2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

No problems found for this qualification.

#### 3. CALIBRATION

The following volatile samples are associated with a continuing calibration whose corresponding initial calibration has percent relative standard deviation (%RSD) outside primary criteria. Hits are qualified "J" and non-detects are flagged "UJ".

Bromomethane, 2-Butanone ECMQ5, ECMQ5MSD, ECMQ9, ECMR1, VBLKE5, VBLKE7, VHBLK

The following volatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

- 2-Butanone ECMQ5, ECMQ5MSD, ECMQ9, ECMR1, VBLKE5
- 1,1,2,2-Tetrachloroethane VBLKE7, VHBLKE2

The following semivolatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits qualified "J" and non-detects are qualified "UJ".

4-Chloroaniline, Di-n-butylphthalate ECMQ5, ECMQ5MS, SBLKH2

#### 4. BLANKS

No problems found for this qualification.

#### 5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The recovery of surrogate S3 (Terphenyl<sub>d14</sub>) in ECMQ5MS was low and S6 (2,4,6-Tribromophenol) in ECMQ5MSD was high. Because only one surrogatin any fraction was out of control in either sample, no action need taken.

Reviewed By: <u>Thomas Sedlacek, Lockheed Martin ESAT</u>
Date: <u>November 30, 1998</u>

se Number: 26593 ite Name: Himco Dump (IN)

SDG Number: ECMQ5 Laboratory: IEA-NJ

Below is a summary of the out-of-control audits and the possible effects CCC says OCT 98 on the data for this case:

Four water samples, numbered ECMQ5, ECMQ9, ECMR0, and ECMR1, were collected on November 2 and 22, 1998. The lab received the samples on November 23, 1998 in good condition. All samples were analyzed for the full list of volatile organic analytes, only sample ECMQ5 was analyzed for the semi-volatile list of organic analytes.

Sample ECMR0 is a trip blank. Sample ECMR1 is a rinseate blank.

According to the chain-of-custody, the lab received the sample aliquots for semi-volatile analysis for all samples except the trip blank, but did not perform the semi-volatile analysis for samples ECMQ9 and ECMR1.

I semivous are in a diff. valid. package

Date: \_\_November 30, 1998

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	November 24, 1998
SUBJECT:	Review of Data  Received for Review on Nov. 18, 1998
FROM:	Stephen L. Ostrodka, Chief (SRT-4J) for flive Octrodka Superfund Technical Support Section 12/3/98
We have re	eviewed the data for the following case:
FROM: Stephen L. Ostrodka, Chief (SRT-4J) for fluid Outwolka Superfund Technical Support Section   12/3/9 8    TO: Data User: USACE  We have reviewed the data for the following case:  SITE NAME: Himco Dump (IN)  CASE NUMBER: 26593   SDG NUMBER: ECMO5    Number and Type of Samples: four (water)  Sample Numbers: ECMO5, ECMO9, ECMRO, ECMRI  Laboratory: IEA   Hrs. for Review: 6.0 +0.5	
CASE NUMBI	ER: 26593 SDG NUMBER: ECMQ5
Number and	d Type of Samples:four (water)
Sample Nur	mbers: <u>ECMQ5, ECMQ9, ECMR0, ECMR1</u>
Laboratory	y: IEA Hrs. for Review: 6.0 +0.5
Following the	are our findings: date are deseptable and useable until the waters cleanized in the attacked neurrature. Artural 2 Byrich

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

		. /		
Data Set No:	CERCLIS No:	11/05	45	
Case No: 26593	Site Name Loca	ation: 🔏	inco,	Dung
Contractor or EPA Lab: IEA	Data User	:	SACE	<del></del>
No. of Samples: B Dat	e Sampled or Dat	a Receiv	ed: <u>//-/</u>	6-98
Have Chain-of-Custody records Have traffic reports or packin If no, are traffic report or p of-custody record? Yes If no, which traffic report o	g lists been re backing list nur No	ceived? Y mbers wri	tten on t	
Are basic data forms in? Yes No of samples claimed:	o. of samples re			
Received by: Synette	Burally.	Date:	1-16-98	
Received by LSSS: Signette	Burrett	Date: _/	11-16-98	
Review started: 11-17-98	Reviewer Signa	ture: <u>/</u>	Elison o	CHar
Total time spent on review: 4	-19 4 % CH Date	review c	completed:	11-19-9
Copied by: Junette C	writt	Date:	11-25-	98
Mailed to user by: Lynett	t Burnett	Date:	11-25-	98
DATA USER: Please fill in the blanks bel Sylvia Griffen, Data mgm				
Data received by:		_ Date:		
Data review received by:		Date:		
Inorganic Data Complete [] Organic Data Complete [] Dioxin Data Complete [] SAS Data Complete []	Suitable for I Suitable for I Suitable for I Suitable for I	ntended I ntended I ntended I ntended I	Purpose [ Purpose [ Purpose [ Purpose [	<pre>] / if ] / if ] / if ] / if</pre>
PROBLEMS: Please indicate reuses.	asons why data		suitable	for yo
Received by Data Mgmt. Coordi	nator for Files.	. Data:		

Semivolatile Analysis Data - ECMQ6

Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMP3 LABORATORY: 1EA-NJ

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	٥
	UNKNOWN	4.34	270.000	
	UNKNOWN	19.04	300.000	J
	UNKNOWN PAH	20.54	260.000	J
	UNKNOWN	20.91	200.000	J
	UNKNOWN	20.98	500.000	J
	UNKNOWN PAH	21.04	2000.000	J
	UNKNOWN PAH	21.10	320.000	
	UNKNOWN AROMATIC	21.21	1200.000	
	UNKNOWN	21.26	490.000	
	UNKNOWN	21.30	1000.000	
	UNKNOWN	21.43	1700.000	,
	UNKNOWN AROMATIC	21.55	340.000	
	UNKNOWN	21.60	280.000	,
	UNKNOWN	21.69	200.000	
	UNKNOWN	21.75	1000.000	
	UNKNOWN	21.82	420.000	
	UNKNOWN AROMATIC	21.95	360.000	
	UNKNOWN AROMATIC	22.09	1600.000	
	UNKNOWN AROMATIC	22.27	270.000	
	UNKNOWN	22.46	420.000	
	UNKNOWN AROMATIC	29.24	270.000	
	UNKNOWN PAR	30.10	200.000	
	UNKNOWN	30.29	1200.000	
	UNKNOWN PAH	30.50	200.000	
	UNKNOWN	30.83	220.000	
	UNKNOWN AROMATIC	31.26	2000.000	
	UNKNOWN	31.44	680.000	

Semivolatile Analysis Data - ECMP4DL Tentatively Identified Compounds LABORATORY: IEA-NJ

CASE NO: 26593 SDG NO: ECMP3

UNKNOWN PAH

UNKNOWN PAH

UNKNOWN PAH

UNKNOWN PAH

UNKNOWN PAH

UNKNOWN PAH

COMPOUND CAS ESTIMATED NUMBER NAME RT CONCENTRATION Q UNKNOWN 4.01 340.000 UNKNOWN 4.26 320.000 J UNKNOWN 6.02 510.000 UNKNOWN 7.44 1700.000 JB UNKNOWN 9.16 390.000 15.66 290.000 UNKNOWN PAH UNKNOWN PAH 15.71 340.000 590.000 UNKNOWN PAH 15.90 UNKNOWN PAH 16.25 230.000 280.000 9,10-ANTHRACENEDIONE 16.31 JN UNKNOWN PAH 16.77 170.000

FILE NAME: ECMP3.SDG DATE: 11/13/98 TIME: 16:25 CADRE98 PAGE: 14

140.000

250.000

440.000

260.000

210.000

1100.000

18.25

22.98

23.52

23.94

27.42

29.81



#### Semivolatile Analysis Data - ECMP6 Tentatively Identified Compounds

CASE NO: 26593 SDG NO: ECMP3 LABORATORY: IEA-NJ

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	c
	UNKNOWN	4.17	100.000	
	UNKNOWN	4.38	200.000	
	UNKNOWN ACID	15.67	130.000	
	UNKNOWN	18.63	81.000	
	UNKNOWN	29.93	82.000	
	UNKHOWN	29.97	130.000	
	UNKNOWN	31.36	210.000	

ASE NO:				
CAS IUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	٥
	UNKNOWN	4.05	80.000	J
	UNKNOWN	4.33	170.000	J
	UNKNOWN	4.65	15000.000	JB
	UNKNOWN ACID	15.67	76.000	J
	UNKNOWN	22.20	76.000	J
	UNKNOWN ALCOHOL	24.64	110.000	J
	UNKNOWN	29.96	140.000	J
	UNKNOWN	31.35	140.000	J

Tentatively Identified Compound 26593 LAB	is		
COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
UNKNOWN	4.34	150.000	
UNKNOWN	14.58	170.000	J
UNKNOWN ACID	15.67	96.000	J
UNKNOWN	20.54	200.000	J
UNKNOWN PAH	20.91	90.000	J
UNKNOWN	22.40	230.000	J
UNKNOWN	24.63	89.000	J
UNKNOWN	31.28	120,000	į
	Tentatively Identified Compound COMPOUND NAME  UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN	COMPOUND NAME RT  UNKNOWN 4.34 UNKNOWN 14.58 UNKNOWN ACID 15.67 UNKNOWN 20.54 UNKNOWN PAH 20.91 UNKNOWN 22.40 UNKNOWN 22.40 UNKNOWN 22.63	Tentatively Identified Compounds   LABORATORY: IEA-NJ

	Semivolatile Analysis Data - ECMP9 Tentatively Identified Compounds			
CASE NO:	26593 LABORAT	TORY: IEA-NJ		
SDG NO:	ECMP3			
CAS NUMBER	COMPOUND NAME	ŔŤ	ESTIMATED CONCENTRATION	
	UNKNOWN ALCOHOL UNKNOWN	5.18 29.96	72.000 88.000	J

Semivolatile Analysis Data - ECMP3

Tentatively Identified Compounds

CASE NO: 26593 LABORATORY: IEA-NJ SDG NO: ECMP3

CAS COMPOUND ESTIMATED NUMBER NAME RT CONCENTRATION Q UNKNOWN 4.08 1500.000 J UNKNOWN ACID 15.68 120.000 UNKNOWN PAH 78.000 15.77 UNKNOWN PAH 18.30 79.000 80.000 UNKNOWN PAH 19.68 J UNKNOWN PAH 23.06 86.000 UNKNOWN PAH 24.02 180.000 UNKNOWN 27.17 130.000 UNKNOWN PAH 27.57 230.000 UNKNOWN PAH 28.57 140.000 UNKNOWN PAH 28.71 210.000 UNKNOWN 30.50 80.000 UNKNOWN 31.09 99.000 FILE NAME: ECMP3.SDG DATE: 11/13/98 TIME: 16:25 CADRE98 PAGE:

Semivolatile Analysis Data - ECMP4

Tentatively Identified Compounds

CASE NO: 26593 LABORATORY: IEA-NJ SDG NO: ECMP3

NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	6.04	540.000	J
	UNKNOWN	7.48	2100.000	JB
•	UNKNOWN	9.21	380.000	J
-	UNKNOWN PAH	15.71	400.000	j
	UNKNOWN PAH	15.77	400.000	J
`	UNKNOWN PAH	15.96	760.000	j
	UNKNOWN PAH	16.30	250.000	j
<b>)</b>	9,10-ANTHRACENEDIONE	16.37	330.000	JN
	UNKNOWN PAH	16.83	190.000	J
	UNKNOWN PAH	18.31	72.000	J
	UNKNOWN PAH	23.08	230.000	J
_	UNKNOWN PAH	23.65	1000.000	j
	UNKNOWN PAH	24.07	400.000	J
	UNKNOWN PAH	27.56	180.000	J
FILE NAME	: ECMP3.SDG DATE: 11/13/98 TIME: 16:25 CADRE98		PAGI	: 7

CASE NO: 20		Semivolatile Analysis Data - Tentatively Identified Comp			
CAS NUMBER		COMPOUND NAME	RT	ESTIMATED CONCENTRATION	0
	UNKNOWN	*	4.09	150.000	
	UNKNOWN		4.35	110,000	J
	UNKNOWN		6.04	140.000	
	UNKNOWN		7.48	840.000	JE
	UNKNOWN		9.21	460.000	
	UNKNOWN	the state of the s	29.97	84.000	

FILE NAME: ECMP3.SDG DATE: 11/13/98 TIME: 16:25 CADRE98 PAGE: 8

Volatile Analysis Data - ECMP3 Tentatively Identified Compounds
LABORATORY: IEA-NJ

CASE NO: 26593 SDG NO: ECMP3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	COLUMN BLEED	17.74	12.000	J

FILE NAME: ECMP3.SDG DATE: 11/13/98 TIME: 16:25 CADRE98 PAGE: 1

	Volatile Analysis Da Tentatively Identifie			
CASE NO: SDG NO:		LABORATORY: IEA-NJ		
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	COLUMN BLEED	17.67	88.000	J
FILE NAME:	ECMP3.SDG DATE: 11/13/98 TIME: 16:25 CADRE98	<u> </u>	PAGE	:

CASE NO: SDG NO:		: IEA-NJ		
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	COLUMN BLEED COLUMN BLEED	17.68 18.31	110.000	ı
ILE NAME:	ECMP3.SDG DATE: 11/13/98 TIME: 16:25 CADRE98		PAGE	:

	Volatile Analysis Data Tentatively Identified							
CASE NO: SDG NO:	•							
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	٥				
	COLUMN BLEED	18.34	97.000	J				
FILE NAME:	ECMP3.SDG DATE: 11/13/98 TIME: 16:25 CADRE98		PAGE	: 4				

	Semivolatile Analysis Data - SE Tentatively Identified Compou			
CASE NO: SDG NO:	26593 L ECMP3	ABORATORY: IEA-NJ		
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	٥
	UNKNOLIN	4.30	420.000	J
	UNKNOWN	4.47	220.000	J
	ALDOL CONDENSATION PRODUCT	4.76	36000.000	JA
	UNKHOWN	5.21	130.000	
	UNKNOWN	5.55	1900.000	
	UNKNOWN	6.28	360.000	
	UNICHOMN	6.42	170.000	
	UNKNOWN	7.47	81.000	
	UNKNOWN	8.33	76.000	,
	UNKNOWN	18.61	67,000	



Sample Number:	ECMQ6		1		l		1		I	
Sampling Location:	SB07-2		1				1			
Matrix:	Soil		1			<del></del>	l <u> </u>		1	
Units:	l ug/kg						ł			
Date Sampled:	10/21/98				1					
Moisture:	3		1		1		1		1	
PH:	7.9		1		1				1	
Dilution Factor:	1.0							<del></del>		
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	340_	U	.		.					
2.4-Dinitrophenol	_860_	_U	.		. 1		1			
Nitrophenol	_860_	_w	.		.					
บโชenzofuran	340_	_U					1			
2.4-Dinitrotoluene	340_	U								
Diethylphthalate	340_	_U	1		1		1			
4-Chlorophenyl-phenylether	340_	U							1	
Fluorene	340_	U			1		1		1	
4-Nitroaniline	J _860_	U	1		i				i —	
4.6-Dinitro-2-methylphenol	860_	U					1			
/-Nitrosodiphenylamine	340_	U					1		1	
4-Bromophenyl-phenylether	_340_				·		1		i	
Hexachlorobenzene	340_	U			i		1		·	
Pentachlorophenol	860_	U			1				1	
Phenanthrene	340_	U					1		1	
Anthracene	340	U					i			
Carbazole	340_	_U			- ; <del></del>		1		1	
Di-n-butylphthalate	340_	-w	1		i ———	<del></del>	<u> </u>		i	
Fluoranthene	340_				- · <del></del>		i ——		1	
rvrene	340	ַט	·		- ; <del></del>		1			
_utylbenzylphthalate	340_	U	·		- <u>'                                   </u>				;	<del></del>
3.3'-Dichlorobenzidine	340_	_U	1	-	- i ———		i ——		i	
Benzo(a)anthracene	340_	_U			- i ———		i ———		i	
Chrysene	340	U			i		i —		1	
bis(2-Ethylhexyl)phthalate	700	_J		-	·				i ———	
Di-n-octylphthalate	340	_w	· ·		- :		1	<del></del>	i	
Benzo(b)fluoranthene	340_		1						i	
Benzo(k)fluoranthene	340	U	1	<del></del>	- <u> </u>					
Benzo(a)pyrene	340	U	i.		- ·				<u> </u>	
Indeno(1,2,3-cd)pyrene	340_	U		-	- ·	<del></del>		-		
Dibenz(a.h)anthracene	340_	U	- ·		-				· · <del></del>	
Benzo(g,h,i)perylene	340_	_U	- ; ———		1		·		· ; ——	





## Analytical Results (Qualified Data)

Page 7 of 8

Case #: 26593

SDG: ECMP3

Site:

HIMCO DUMP. ELKHART

Lab. : Reviewer: IEANJ

Date:

Sample Number:	ECMQ6		l		1		i		1	
Sampling Location:	SB07-2		1		1		1		1	
Matrix:	Soil		1		I		I		1	
Units:	ug/kg		1	·	1		l		1	
Date Sampled:	10/21/98				1		ł		1	
%Moisture:	3		1				l		1	
PH:	17.9		l				1			
Dilution Factor:	1.0						!		!	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	
Phenol	1 _340_	_U	.					-		
bis(2-Chloroethyl)ether	[ _340_	U	.		.		.		.	_
2-Chlorophenol	_340_	U	.		.		.		. !	_
1.3-Dichlorobenzene	_340_	_U	. !		.		.		1	_
1.4-Dichlorobenzene	340_	_U	. 1		1		.			
1,2-Dichlorobenzene	340_	U	. 1				1			7
2-Methylphenol	_340_		1		1		.			Ì
2.2'-oxybis(1-chloropropane)	1 _340_	_U	1		1		1		1	_
4-Methylphenol	340_				1					_
N-Nitroso-di-n-propylamine	340_	_U	· · · · · · · · · · · · · · · · · · ·				1		i —	_
Hexachloroethane	340_	_w	1				1		1	_
Nitrobenzene	340_	U	·				- · <u></u>		· i	_
Isophorone	340_	U	1	*	· <del></del>				1	_
2-Nitrophenol	340_	U	i —	<del></del>			- ;		- ;	_
2.4-Dimethylphenol	340_	U	1				- <del> </del>		·	_
bis(2-Chloroethoxy)methane	340_	_U			·		- ;		· ·	
2.4-Dichlorophenol	340_		· · ·		-	,	- ;	<del></del>	- ;	
1.2.4-Trichlorobenzene	340_	_U	· · <del></del>		-		-	-	·	-
Naphthalene	340_	_U			·		- ;			_
4-Chloroaniline	340_				- ¦		-		- '	-
Hexachlorobutadiene	340_	_U			-		- ! <del></del>		-	-
4-Chloro-3-methylphenol	340_	_U	·		-	***	-		-	-
2-Methylnaphthalene	340_				- !		-	<del></del>	-	-
Hexachlorocyclopentadiene	340_	_U U	- !		- !		-		-	-
2,4,6-Trichlorophenol			-		-		-		- !	-
	1 340_	_U	- !		-	·	- !		- !	-
2.4.5-Trichlorophenol	1 _860_	_U	- \		- !		-		_	-
2-Chloronaphthalene	_340_		-	<u>-</u> -	-!		-		-	-
2-Nitroaniline	_860_	_U	- !		-!		- ! ———		-!	-
Dimethylphthalate	_340_		- !		-!		-!		- !	
Acenaphthylene	_340_	_U	- !		- !		_		_	
2.6-Dinitrotoluene	1 _340_	_U	-!		_		_		_	
3-Nitroaniline	_860_	_U	_ !	<del></del>	_ 1		_		_	
	1		ł		1		1		1	-6

								Page 6	OT 8	
Sample Number:	ECMP7		ECMP8		   ECMP9		ECMP9MS		ECMP9MSD	- <del> </del>
ampling Location:	SB09-10		SB09-2		SB07-0.5		SB07-0.5		SB07-0.5	•
Matrix:	Soil		Soil		Soil		Soil		Soil	
Jnits:	l ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/21/98		10/21/98		10/21/98		10/21/98		10/21/98	
Moisture:	[ 5		1 5		4		1 4		[ 5	
PH:	7.3		1 8		7.4		1.7		17.2	
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	350_		350_		340_	- <u>- w</u>	770_		1_1100_	
2.4-Dinitrophenol	870_	_U	_870_	U	860_	U	_860_	_U	<u>_</u> 870_	_U
-Nitrophenol	_870_	_w	870	_w	860_	_w	1_1200_	_J	1800_	_J
ibenzofuran	350_	U	350_	_U	_340_		_340_	U	350_	_U
Dinitrotoluene	350_		] _350_	U	] 340	U	780_		1 _1100_	
ethylphthalate	_350_	_U	350_	_U	340_	U	1 _340_		350_	_U_
-Chlorophenyl-phenylether	350	_U	350_	_U	340_	_U	340_	_U	_350_	_U
Тиогеле	350_	U	1_350_	U	340_		340_	_U	[ _350_	U
-Nitroaniline	870_		870	U	860	_U	860		870_	_U
.6-Dinitro-2-methylphenol	870	U	_870_	_U	860_		860		870_	
-Nitrosodiphenylamine	<u>_</u> 350_	_U	350_	U	1 340_	U	340_		350_	_U
Sromophenyl-phenylether	350	_U	350	_U	340_	_U	1_340_	_U	350	
kachlorobenzene	350_	_U	350_	U	340	_U	340_	U	350_	_U_
Pentachlorophenol	870_		870_		860	_w	1200_		2000_	
henanthrene	350	_U	350	Ü	340	_U	340	U	350_	_U_
nthracene	350_	_U	350_		340_	_U	1_340_		_350_	U
arbazole	1 350	บ	350_	U	340_		340		350_	U
i-n-butylphthalate	350_	_w	350_	_w	340_	_w	340	_w	350_	_w_
luoranthene	350	_U	350_	U	340	U	340_		350_	U
yrene	_350_	_U	_350_	_U	340_	_w	960_		1500_	_~~
Butylbenzylphthalate	350	_บ	350	_U	340	_ <del></del> _	340	_U_	350	U
?'-Dichlorobenzidine	350	_U	_350_	U	[_340_		340_	_U	350_	
:=Zo(a)anthracene	350_	_U	_350_	_UU	] _340_		1_340_		1_350_	_U
hrysene	350_		350_	_ <u></u> U	_   _340_		340_		350_	U
ois(2-Ethylhexyl)phthalate	470_	_J	2600	_J	1 690	_J	250_	_J	_330_   _710_	_J
nace resymment representation of the control of the	350	_w	] _350_	_w		_w	340	_w	] _350_	_w_
enzo(b)fluoranthene	350_	_W	_   _350_ _   _350_	_w	1 340	 _U	340_	 _U	1_350_	_00_ _U
denzo(k)fluoranthene	_350_	_ย	350_	_0	_   _340_ _   _340_	_U	340_	_U	1_350_	_0
Benzo(a)pyrene	350_		_   _350_ _   _350_	_0	_ 1 _340_	_0	340_		[ _350_   _350_	
Indeno(1,2,3-cd)pyrene	_350_	-0	_	_v	_   _340_	_ <del>U</del>	340	_0	1_350_	
Dibenz(a,h)anthracene	350_		350	_0	_   _340_	_U	340		350_	u U
Benzo(g.h.i)perylene	· <del>-</del> -	_U	_				· · <del>-</del> -			
renzu(g.n. rypery rene	_350_	U	- i -220_	_U	_   _340_	_U	_340_		_350_	_U



Case #: 26593

SDG: ECMP3

Site:

HIMCO DUMP, ELKHART

Lab. : Reviewer: IEANJ

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Sampling Location:   S809-10   S809-2   S807-0.5   S807-0.5   S807-0.5	mple Number:	ECMP7		ECMP8		ECMP9		1 ECMP9MS		ECMP9MSD	
NearTix:	mpling Location:	SB09-10		•		SB07-0.5		•			
Date Sampled:   10/21/98   10/2	trix:	Soil		Soil		Soil		Soil		•	
Date Sampled:   10/21/98	its:	l ug/kg		l ug/kg		ug/kg		l ug/kg			
Not sture:   5	te Sampled:					10/21/98					
Production	oisture:	1 5		1 5		1 4		1 4		•	
Semivolatile Compound   Result   Flag   Flag	:	1 7.3		1 8		17.4		17		•	
Phenol   350_ U   350_ U   340_ U   340_ U   340_ U   350_ U   350_ U   350_ U   340_ U   340_ U   350_ U   350_ U   350_ U   350_ U   340_ U   340_ U   350_ U   350_ U   350_ U   350_ U   340_ U   340_ U   350_ U   350_ U   350_ U   350_ U   340_ U   340_ U   350	lution Factor:	•		1.0		1.0		1.0		•	
Dis(2-Chloroethyl)ether	mivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	- Flag
bis(2-Chloroethyl)ether           350         U   330         U   340         U   340         U   340         U   350           2-Chlorophenol           350           U   330           U   340           U   1340           U   1360           1900           1.3-Dichlorobenzene           350           U   3350           U   340           U   340           U   350           1.2-Dichlorobenzene           350           U   330           U   340           U   340           U   350           2-Pethylphenol           350           U   350           U   340           U   340           U   350           2,2'-oxybis(1-chloropropane)           350           U   350           U   340           U   340           U   350           2,2'-oxybis(1-chloropropane)           350           U   350           U   340           U   340           U   350           1,2-SC           U   350           U   350           U   340           U   340           U   350           1,2-SC           U   350           U   350           U   340           U   340           U   350           1,2-SC           U   350           U   340           U   340           U   340           U   350           1,2-SC           U   350           U   340           U   340           U   340	enol					.    340_	_ <u>_</u> w	1400_		2500	
2-Chlorophenol   350	s(2-Chloroethyl)ether	_350_		350_	U	] _340_		340_	_U		_U
1.3-Dichlorobenzene   350	Chlorophenol	350_		1 350		340					
1.4-Dichlorobenzene   350	3-Dichlorobenzene	_350_		320_		1_340_		_340_	U		_U
1.2-Dichlorobenzene         350       U   350       U   350       U   340       U   340       U   350         2-Netrylphenol         350       U   350       U   350       U   340       U   350       U   350         2-Y-oxybis(1-chloropropane)         350       U   350       U   340       U   340       U   350         4-Metrylphenol         350       U   350       U   340       U   340       U   350         N-Nitroso-di-n-propylamine         350       U   350       U   340       U   340       U   350         Nexachloroethane         350       U   350       U   340       U   340       U   350         Nitrobenzene         350       U   350       U   340       U   340       U   350         Isophorone         350       U   350       U   340       U   340       U   350         2-Nitrophenol         350       U   350       U   340       U   340       U   350         2-A-Chinchylphenol         350       U   350       U   340       U   340       U   350         2-A-Dichlorophenol         350       U   350       U   340       U   340       U   350         1.2-A-Trichlorophenol         350       U   350       U   340       U   340       U   350	4-Dichlorobenzene	350_									
2-Methylphenol   350	2-Dichlorobenzene		_U						U		U
2,2 - oxybis(1-chloropropane)   350	Methylphenol	_350_		350							· · ·
4-Methylphenol   350	2'-oxybis(1-chloropropane)	_350_		350		340				– –	
N-Nitroso-di-n-propylamine   350	Methylphenol		U	[ 350	U			340	U		
Hexachloroethane	Nitroso-di-n-propylamine	_350_		[ 350							
Nitrobenzene   350	xachloroethane					340	_ <u>ພ</u>		w		_ເມ_
1sophorone	trobenzene							·			U
2-Nitrophenol   350	ophorone		. U								
2.4-Dimethylphenol         350	Nitrophenol	·				340				– –	_U
bis(2-Chloroethoxy)methane         350         U         350         U         340         U         340         U         350           2.4-Dichlorophenol         350         U         350         U         350         U         350         U         350         U         350         U         350         U         350         U         1350         U         340         U         340         U         350         U	4-Dimethylphenol	350						· · <b>-</b> -	-	-	
350	s(2-Chloroethoxy)methane										_U
1.2.4-Trichlorobenzene       350       U       350       U       340       U       770       1100         Naphthalene       350       U       350       U       340       U       340       U       350         4-Chloroaniline       1350       U       350       U       340       U       340       U       350         Hexachlorobutadiene       1350       U       350       U       340       U       340       U       350         4-Chloro-3-methylphenol       350       U       350       U       340       U       1400       2100         2-Methylnaphthalene       350       U       350       U       340       U       340       U       350         2-Methylnaphthalene       350       U       350       U       340       U       340       U       350         2-Methylnaphthalene       350       U       350       U       340       U       340       U       350         2.4.6-Trichlorophenol       350       U       350       U       340       U       340       U       350         2-Chloronaphthalene       350       U       350       U <td>4-Dichlorophenol</td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>-1.</td>	4-Dichlorophenol					-					-1.
Naphthalene   350	2.4-Trichlorobenzene							· · <del>-</del> -			-
4-Chloroaniline   350   U   350   U   340   U   340   U   350    Hexachlorobutadiene   350   U   350   U   340   U   340   U   350    4-Chloro-3-methylphenol   350   U   350   U   340   U   340   U   350    2-Methylnaphthalene   350   U   350   U   340   U   340   U   350    Hexachlorocyclopentadiene   350   U   350   U   340   U   340   U   350    2.4.6-Trichlorophenol   350   U   350   U   340   U   340   U   350    2.4.5-Trichlorophenol   870   U   870   U   860   U   870    2-Chloronaphthalene   350   U   350   U   340   U   340   U   350    2-Nitroaniline   870   U   870   U   860   U   860   U   870    2-Nitroaniline   870   U   870   U   860   U   860   U   870    2-Nitroaniline   870   U   870   U   340   U   340   U   350    Acenaphthylene   350   U   350   U   340   U   340   U   350    2.6-Dimitrotoluene   350   U   350   U   340   U   340   U   350    U   350   U   350   U   350   U   340   U   340   U   350    2.6-Dimitrotoluene   350   U   350   U   340   U   340   U   350    U   350   U   350   U   350   U   340   U   340   U   350    2.6-Dimitrotoluene   350   U   350   U   340   U   340   U   350    U   350   U   350   U   350   U   340   U   340   U   350    2.6-Dimitrotoluene   350   U   350   U   340   U   340   U   350    U   350   U   350   U   350   U   340   U   340   U   350    2.6-Dimitrotoluene   350   U   350   U   340   U   340   U   350    U   350   U   350   U   350   U   340   U   340   U   350    2.6-Dimitrotoluene   350   U   350   U   340   U   340   U   350    2.6-Dimitrotoluene   350   U   350   U   340   U   340   U   350    2.6-Dimitrotoluene   350   U   350   U   340   U   340   U   350    3.60   U   350   U   350   U   340   U   340   U   350    3.70   U   350   U   350   U   340   U   340   U   350    3.70   U   350   U   350   U   340   U   340   U   350    3.70   U   350   U   350   U   340   U   340   U   350    3.70   U   350   U   350   U   340   U   340   U   350    3.70   U   350   U   350   U   340   U   340   U   350    3.70   U   350   U   350   U   340   U	phthalene								U		_U
Hexachlorobutadiene   350	Chloroaniline	. – –				· · • •		· ·			_U
4-Chloro-3-methylphenol   350   U   350   U   340   U   1400   2100   2-Methylnaphthalene   350   U   350   U   340   U   340   U   350   U   350   U   350   U   350   U   340   U   350   U   350   U   350   U   350   U   340   U   350	exachlorobutadiene	1 350									U
2-Methylnaphthalene       350       U       350       U       340       U       340       U       350         Hexachlorocyclopentadiene       350       U       350       U       340       U       340       U       350         2.4.6-Trichlorophenol       350       U       350       U       340       U       340       U       350         2.4.5-Trichlorophenol       870       U       870       U       860       U       860       U       870         2-Chloronaphthalene       350       U       350       U       340       U       340       U       350         2-Nitroaniline       870       U       870       U       860       U       870       U       870         Dimethylphthalate       350       U       350       U       340       U       340       U       350         Acenaphthylene       350       U       350       U       340       U       340       U       350         2.6-Dinitrotoluene       350       U       350       U       340       U       340       U       350	Chloro-3-methylphenol								-		
Hexachlorocyclopentadiene         _350_         U	Methylnaphthalene								U		U
2.4.6-Trichlorophenol         350	exachlorocyclopentadiene									-	_U
2.4.5-Trichlorophenol       870       U       870       U       860       U       860       U       870         2-Chloronaphthalene       350       U       350       U       350       U       350       U       350       U       350       U       350       U       870       U       860       U       870       U       870       U       870       U       860       U       860       U       870       U       870       U       860       U       860       U       870       U       870       U       870       U       870       U       870       U       860       U       860       U       870       U       870       U       870       U       870       U       870       U       870       U       860       U       860       U       870       U       870       U       870       U       870       U       350       U       350       U       340       U       340       U       350       U       350       U       350       U       340       U       340       U       1350       U       1350       U       1340       U	4.6-Trichlorophenol	· <del>-</del> -						– –			
2-Chloronaphthalene       350       U       350       U       340       U       340       U       350         2-Nitroaniline       870       U       870       U       860       U       870       U       870         Dimethylphthalate       350       U       350       U       340       U       340       U       350         Acenaphthylene       350       U       350       U       340       U       340       U       350         2.6-Dinitrotoluene       350       U       350       U       340       U       340       U       350	4.5-Trichlorophenol	i 870									
2-Nitroaniline         870	-Chloronaphthalene										_U_
Dimethylphthalate         350	•										
Acenaphthylene         350		·									
2.6-Dinitrotoluene   350	* '										_U
		. – –									
3-NILFDANILINE	-Nitroaniline	870_		_   _870_	_0	_   _860_		_   _860_	_U	_   _870_	_u_ _u_



4	
	1

Sample Number:	ECMP3		ECMP4		ECMP4DL		ECMP5		ECMP6	
Sampling Location:	SB11-0.5		SB11-2		SB11-2		SB11-6		SB09-0.5	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/21/98		10/21/98		10/21/98		10/21/98		10/21/98	
%Moisture:	8		4		4		4		6	
PH:	7.8		8.3		8.3		8.1		7.2	
Dilution Factor:	1.0		] 1.0		1 2.0		1 1.0		1 1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	360_	U	160_	_ <u>_</u> j	1 _160_	_J		U	350_	U_
2.4-Dinitrophenol	_900_	_U	_860_	_U	_1700_	_U	1_860_	_U	_880_	_U
4-Nitrophenol	_900_	_w	_860_	_w	_1700_	_w	_860_	_ധ	880_	_w_
Dibenzofuran	_360_	_U	78_	_J	75_	_J	340_		350_	
2.4-Dinitrotoluene	360_	_U	340_	_U	_690_	_U	_340_	_U	350_	_U
^ thylphthalate	_360_	_U	_340_	_U	_690_	_U	_340_	_ U	1 _350_	_U_
αμκιλοrophenyl-phenylether	360_	_U	] _340_	U	690_	_U	1_340_	U	350	_U_
Fluorene	_360_	U	160_	_J	160_	_J	] _340_	_U	[ _350_	_U_
4-Nitroaniline	900_	_U	860_	U	_1700_	U	_860_	U	880_	
4.6-Dinitro-2-methylphenol	900_	U	860_	U	1700	U	860	U	880_	_U_
N-Nitrosodiphenylamine	_360_	_U	_340_	U	_690_	U	1_340_		350_	U
4-Bromophenyl-phenylether	360_	_U	340_	_U	_690_	U	_340_	· _U	350	
Hexachlorobenzene	360_	_U	340_	U	_690_	U	340_	_U	350_	_U_
htachlorophenol	_900_	U	860_	U	1 1700_	U	860_	U	[ 880_	
menanthrene	200_	_J	_4000_		_3300_		_340_	U	_350_	_U_
Anthracene	[ _360_	_U	460_		_460_	J	_340_	_U	350_	_U_
Carbazole	_360_	_U	210_	_J	_210_	 J	] _340_	U	] _350_	_U_
Di-n-butylphthalate	360_		340	_w	[ 690_	_U	340_	_w	350_	
Fluoranthene	1_400_		4600		4600		51_	_J	350_	_U_
Pyrene	470_		3800		3800_		340_		350_	_U_
Butylbenzylphthalate	[ _360_	U	340_	U	690_	U	340_		350_	_U_
3.3'-Dichlorobenzidine	360_	U	340_	_U	690_	_U	340_		350_	
Benzo(a)anthracene	_280_	J	1500		1500		_42_	_j	350_	
/sene	320	_J	1400	*	1 1500		51		_350_	
ois(2-Ethylhexyl)phthalate	42_	_J	74_	J	_   _90_	J	39_	_J	440_	_J_
Di-n-octylphthalate	360_	_w	340_	_UJ			340_	_w	_350_	
Benzo(b)fluoranthene	560		1900_		1500_		75_	_J	_   _350_	
Benzo(k)fluoranthene	150_	J	560_		420_	J	340_		1_350_	_U_
Benzo(a)pyrene	430_		1500_		1300		57_		350_	
Indeno(1,2,3-cd)pyrene	540_		490_		_   _770_		_	_s	_	_U_
Dibenz(a,h)anthracene	1 140	_J	130	J	_	J	340_		_   _350_	_0_ _U_
Benzo(g,h,i)perylene	710_	-~-	470_	-~-	860	_~	_63_		_   _350_	_U_ _U_



SDG: ECMP3

Site:

HIMCO DUMP, ELKHART

Lab. : Reviewer: IEANJ

Date:										
Sample Number:	ECMP3		ECMP4		ECMP4DL		ECMP5		ECMP6	
Sampling Location:	SB11-0.5		SB11-2		SB11-2		SB11-6		SB09-0.5	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/21/98	•	10/21/98		10/21/98		10/21/98		10/21/98	
#Moisture:	18		1 4		4		1 4		1 6	
PH:	7.8		j 8.3		8.3		8.1		7.2	
Dilution Factor:	1.0		1 1.0		[ 2.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	- Flag
Phenol	_360_		340_	U	690_		340_	U	350_	- <del>U</del>
bis(2-Chloroethyl)ether	360_	_U	] _340_	_U	_690_	Ŭ	340_	_ U	350_	
2-Chlorophenol	360_	_U	340	U	_690_	_U	_340_	_U	350_	
1.3-Dichlorobenzene	360_	U	340_	U	_690_		340_	U	350	_U
1.4-Dichlorobenzene	_360_	U	340	U	690_	U	_340_		_ j _350_	
1.2-Dichlorobenzene	360_	_U	340	U	_690_	_U	340_	_U	350_	_U
2-Methylphenol	360_	U	340_	U	_690_	U	_340_		_   _350_	_U
2.2'-oxybis(1-chloropropane)	_360_	_U	340_	_U	_690_	U	_340_	_U	] _350_	U
4-Methylphenol	360_	U	340_	U	690_	U	340_	_U	350	-,-
N-Nitroso-di-n-propylamine	_360_	U	340_	U	690_	U	_340_	_U	350_	
Hexachloroethane	_360_	_w	340_	_W	_690_	_W	_340_	_w	350	
Nitrobenzene	360_	U	340_	U	1_690_	U	] _340_	_U	350_	υ
Isophorone ·	360_	_U	340_	U	[ _690_	U	_340_	_U	_350_	_U
2-Nitrophenol	360_	U	[ _340_	U	690_	_U	340_	U	_ [ _350_	_U
2.4-Dimethylphenol	360_	_U	340_	_U	_690_	_w	340_	u	_   _350_	_U
bis(2-Chloroethoxy)methane	360_	_U	340_	_U	_690_	_U	340_	U	350_	U
2,4-Dichlorophenol	360_	_U	340_	U	_690 <u>-</u>	_U	340_	_U	1_350_	_U
1.2.4-Trichlorobenzene	360_	υ <u></u>	340_	_U	_690_	_U	340_		350_	
Naphthalene	360_	U	340_	_U	[ _690_	_U	340_	U	350_	t!
4-Chloroaniline	360_	U	340_	U	690_	_U	340_		_ [ _350_	· · · —
Hexachlorobutadiene	] _360_	U	340_	_U	690_	_w	340_		_   _350_	
4-Chloro-3-methylphenol	360_	U	340_	_U	_690_	_U	340_	_U	_	
2-Methylnaphthalene	360_		340_	_U	_690_	_U	_340_	_U	350_	
Hexachlorocyclopentadiene	360_		340_		_690_	_w	]_340_	_U	_   _350_	_v
2,4,6-Trichlorophenol	360_	_U	340_	_0	_   _690_ _   _690_		340_	_U	_   _350_	U
2.4.5-Trichlorophenol	900	U	1 860	U	1700	_U	_860_		_   _880_	
2-Chloronaphthalene	360_		340_		_690_		_   _340_		_   _350_	
2-Nitroaniline	1_900_	_0	_860_	_U	_   _030_	_U	_860_		_   _880_	_U
Dimethylphthalate	1_360_		_340_		_   _1700_	_U	_   _340_	_U	_   _880_ _   _350_	_U
Acenaphthylene	_360_   _360_	_U	_340_   _340_			_U		_U		_U
2.6-Dinitrotoluene		-0	1 _340_   _340_	_U	1 690_	_U	340_	_U	_   _350_	_U
3-Nitroaniline	360_			_U	_ [ _690_	_U	_   _340_		_   _350_	_U
J-Milli Oddi i i i ie	_900_	_U	1 _860_	_U	_   _1700_	_U	_   _860_	_U	_ [ _880_	_U



Site:

Lab. : Reviewer: Date:

SDG: ECMP3

HIMCO DUMP, ELKHART

IEANJ

Sample Number:	ECMP8		ECMP9		ECMP9MS		ECMP9MSD		ECMQ6	_
Sampling Location:	SB09-2		SB07-0.5		SB07-0.5		SB07-0.5		\$807-2	
Matrix:	Soil		Soil		Soil		[ Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/21/98		10/21/98		10/21/98		10/21/98		10/21/98	
Moisture:	5		4		4		5		] 3	
PH:	1		l		l		1		I	
Dilution Factor:	1.0		1.0		1.0 		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Chloromethane	_10_	_w	1 _10_		1_10_	_w	10_	_w	10_	
omomethane	J _10_	_U	J _10_	_U	J_10_	_U	1_10_	_U	_10_	_U
linyl Chloride	_10_	_U	_10_	_U	_10_	_U	_10_	_U	1_10_	_U
Chloroethane	_10_	_w	_10_	_w	_10_	_w	_10_	_w	_10_	_ພ_
Methylene Chloride	_10_	_u	_10_	_U	_10_	_U	_10_	_U	_10_	_U_
Acetone (	_10_	_U	_10_	_U	1_10_	_U	_10_	_U	_10_	_U
Carbon Disulfide	_10_	_U	_10_	_U	_   _10_	_U	1_10_	_U	_10_	_U_
1.1-Dichloroethene	_10_	_U	_10_	U	_   _57_		_56_		_   _10_	_U
1.1-Dichloroethane	_10_	_U	_10_	_U	_10_	_U	.   _10_	_U	_   _10_	_U
otal 1.2-Dichloroethene	_10_	_U	_10_	_U	_   _10_	_U	_10_	_U	_   _10_	_U_
Chloroform	_10_	_U	_10_	_U	_	_U	_10_	_U	_   _10_	_U_
2-Dichloroethane	_10_	_U	_10_	_U	_   _10_	_U	_10_	_U	_   _10_	_U_
2-Butanone	_10_	_U	1_10_	_U	_   _10_	_U	1_10_	_U	_   _10_	_U_
1.1.1-Trichloroethane	_10_	_U	_10_	_U	1_10_	_U	_10_		_10_	_U_
Carbon Tetrachloride	_10_	_U	1_10_	_U	1_10_	_U	_ 10_	_U	_   _10_	_U_
Bromodichloromethane	_10_	_U	_10_	_U	_   _10	_U		_U	_   _10_	_U_
1.2-Dichloropropane	_10_	_U	_10_	_U	_   _10_	_U	_(  _10_	_U	_   _10_	_U_
Cis-1.3-Dichloropropene	_10_	_U	1 _10_	_U	_   _10_	_U	_10_	_U	_   _10_	_U_
richloroethene	1_10_	_U	_10_	_U	_   _58_		.   _64_		_   _10_	_U_
poromochloromethane	_10_	_U	_10_	_U	_   _10_	_U	_10_	_U	_   _10_	_U_
1.1.2-Trichloroethane	_10_	_U	1_10_	_U	_   _10	_U	_   _10_	_U	_   _10_	_U_
Benzene	[ _10_	_U	_10_	_U	_ [ _61	<del></del>	_65_	<del>-</del>	_   _10_	_U_
Frans-1.3-Dichloropropene	_10_		_10_	_U	_   _10_	_U	1_10_	_U	_   _10_	_U_
Bromoform	_10_	_U	_10_	_U	_ [ _10_	_U	_   _10_	_U	_ \ _10_	_U
4-Methyl-2-pentanone	_10_	_U	1_10_	_U	_   _10_	_U	_   _10_	_U	_ \ _10_	_U_
2-Hexanone	_10_	_U	_10_	_U	_   _10_	_U	_   _10_	_U	_   _10_	_U_
Tetrachloroethene	_10_	_w	_10_	_m	_   _10_	_w	_   _10_	_w	_   _10_	_ພ
1.1.2.2-Tetrachloroethane	_10_		_10_	_U	_   _10_	_U	_   _10_	_U	_   _10_	_U_
Toluene	_10_		_10_		_   _62_		_   _62_		_   _10_	_U_
Chlorobenzene	1_10_	· _U		_U	_   _69_		_   _67_	<del></del>	_ 1 _10_	_U_
Ethylbenzene	1_10_		_10_	_U	_   _10_	_U	_   _10_	_U	_   _10_	_U_
Styrene	1_10_	_U	_10_	_U	_   _10_		_   _10_	_U	_   _10_	_U_
Xylene (total)	_10_	_U	_10_	_U	_	_u	_   _10_	_u	_ \ _10_	_U_



SDG: ECMP3

Site:

HIMCO DUMP, ELKHART

Lab.: Reviewer: IEANJ

Keviewer	:
Date:	

Sample Number:	J ECMP3		ECMP4		J ECMP5		ECMP6		ECMP7	<del></del>
Sampling Location:	SB11-0.5		SB11-2		SB11-6		SB09-0.5		SB09-10	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/21/98		10/21/98		10/21/98		10/21/98		10/21/98	
#Moisture:	8		4		4		6		5	
PH:	1		1		ĺ		1		1	
Dilution Factor:	1 1.0		1 1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Chloromethane	1_11_	_w	1_10_	_ <u>_</u> w	10_	_w		_w	1 _10_	_w
Bromomethane	_11_	_U	_10_	U	_10_	_U	_11_	_U	_10_	_''
Vinyl Chloride	_11_	_U	[_10_	_U	_10_	U	_11_	_U	1_10_	
Chloroethane	_11_	_w	1_10_	_w	_10_	_w	1_11_	_w	10_	_w
Methylene Chloride	1_11_	_U	1 _10_	_U	1_10_		1 _11_		10_	
Acetone	_11_	_υ	1_10_	_U	1_10_	_U	[ _11_	U	_10_	_U
Carbon Disulfide	1_11_	U	1_10_	U	1_10_	U	111_		10_	U
1.1-Dichloroethene	_11_	U	_10_	U	1_10_	_U	_11_	_U	10_	_U
1.1-Dichloroethane	_11_	_U	1_10_	U	1_10_	U	11_	_U	_10_	U
Total 1.2-Dichloroethene	11_		10_	U	1_10_	U	11_	_U	10_	
Chloroform	_11_	U	1_10_		1_10_	_U	11_	U	1_10_	1
1.2-Dichloroethane	_11_	υ	1_10_	_U	1 10_	_U	11_	U	10_	U
2-Butanone	_11_	_U	1 _10_	_U	1_10_	U	111_	_U	1 _10_	U
1.1.1-Trichloroethane	1_11_	U	1_10_	_U	1 _10_	_U	11_	_U	] _10_	_U
Carbon Tetrachloride	_11_		1_10_	_U	1_10_		111	U	1_10_	
Bromodichloromethane	_11_	_U	1 10	U	1_10_		111	_U	10_	_U
1.2-Dichloropropane	1_11_	U	1_10_	_U	1_10_	_U	111	_U	1_10_	
Cís-1,3-Dichloropropene			1_10_	_U	1 10	_U	111_		1 _10_	_U
Trichloroethene	1_11_	U	1_10_	_U	1_10_	_U	111	_ U	10_	_U
Dibromochloromethane	_11_	U	_10_	U	1_10_	_U	11	_U	10_	_
1.1.2-Trichloroethane	1 _11_	_ U	1_10_	U	1 _10_	_ U	111	_u	1_10_	_Ú
Benzene	1 11		1_10_	_U	10_	_U	111_	_U	10_	
Trans-1.3-Dichloropropene	1_11_	_U	1_10_	_U	1 10_		11_		1 _10_	_U
Bromoform	1_11_	U	1_10_	_U	10_		1 _11_	_U	1 _10_	U
4-Methyl-2-pentanone	1_11_	_U	1_10_	_U	10_		1_11_	_U	1 _10_	
2-Hexanone	1 _11_	_U	10_	_U	_10_		1_11_	U	1_10_	_U
Tetrachloroethene	11_	_w	1_10_	_w	10_	_w	111_	_w	10	_w
1.1.2.2-Tetrachloroethane	1_11_	_U	1_10_	_U	1_10_	_U	11_	_U	1_10_	_U
Toluene	1_11_	U	1_10_	_U	1_10_	U	1 _11_	U	10_	_U
Chlorobenzene	111		] _10_	_U	1_10_	_U	_11_	_U	1 _10_	
Ethylbenzene	_11_	_ <u></u>	, _10_   _10_	_U	_10_		1 _11_	_U	_10_	_0
Styrene	1 _11_		1_10_	_U	_10_	_U	.   _11_   _11_		1 _10_	_0
Xylene (total)	_11_		1_10_							
Ayrene (cocor)	1 -44-		! <sup>1</sup> '	_U	_10_		_   _11_	_U	_10_	_U



## CADRE Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sam quantitation limit.
J	The anlayte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precise measure the analyte in the sample.
N	The analysis indicates the present of an analyte for which there is presumpti evidence to make a tentative identification.
NJ	The analysis indicates the present of an analyte for which there is presumpti evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present)
н	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

se Number: 26593

Site Name:

HIMCO DUMP (IN)

SDG Number:

ECMP3

Laboratory:

IEA

#### ADDITIONAL INFORMATION 12.

pH Table.

Sample ID:	Matrix:	pН	Sample ID:	Martrix:	рН
ECMP3	Soil	7.8	ECMP7	Soil	7.3
ECMP4	Soil	8.3	ECMP8	Soil	8.0
ECMP5	Soil	8.1	ECMP9	Soil	7.4
ECMP6	Soil	7.2	ECMQ6	Soil	7.9

nenanthrene, Fluoranthene and Pyrene exceeded the instrument's calibration range in semivolatile sample ECMP4; the results from ECMP4DL should be considered the concentrations for these analytes.



Reviewed By: <u>A.C.Harvey/Lockheed-Martin ESAT</u>

Date: November 18, 1998

Case Number :

Site Name:

8.

26593

HIMCO DUMP (IN)

SDG Number: Laboratory: ECMP3

IEA

No problems found for this qualification.

INTERNAL STANDARDS

#### 9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms it appears that all VOA, SVOA, and Pesticide/PC compounds were properly identified.

#### 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following semivolatile samples have analyte concentrations below the quantitation limit (CRQL). Al results below the CRQL are qualified "J".

#### ECMP3

Phenanthrene, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(k)fluoranthene, Dibenz(a,h)anthracene

#### ECMP4

Acenaphthene, Dibenzofuran, Fluorene, Carbazole, bis(2-Ethylhexyl)phthalate, Dibenz(a,h)anthracene

#### ECMP4DL

Acenaphthene, Dibenzofuran, Fluorene, Anthracene, Carbazole, bis(2-Ethylhexyl)phthala Benzo(k)fluoranthene, Dibenz(a,h)anthracene

#### **FCMP5**

Fluoranthene, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

#### ECMP9MS

bis(2-Ethylhexyl)phthalate

#### SBLKH5

Pyrene

#### 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance. The GC baseline for the pesticide analysis was acceptable.

Reviewed By: A.C. Harvey/Lockheed-Martin ESAT

Date: <u>November 18, 1998</u>

se Number : te Name:

26593

HIMCO DUMP (IN)

SDG Number: Laboratory: ECMP3

IEA

Di-n-butylphthalate

ECMP3, ECMP4, ECMP5, ECMP6, ECMP7, ECMP8, ECMP9, ECMP9MS, ECMP9MSD, ECMQ6, SBLKH5

#### 4. **BLANKS**

The following semivolatile samples have analyte concentrations reported below the CRQL and less than c equal to five times (5X) the associated method blank concentration. Reported sample concentrations hav been elevated to the CRQL. Hits are flagged "U" and non-detects are not flagged.

ECMP5

Pyrene

#### SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

No problems found for this qualification.

#### 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

he relative percent difference (RPD) between the following semivolatile matrix spike and matrix spike duplicate recoveries is outside criteria.

ECMP9MS, ECMP9MSD

Phenol, 1,4-Dichlorobenzene, 1,2,4-Trichlorobenzene, 4-Chloro-3-methylphenol, Acenaphthene, Pentachlorophenol, Pyrene

The following semivolatile matrix spike/matrix spike duplicate samples have percent recovery outside teria.

ECMP9MSD

Phenol

The presence of Phenol, 1,4-Dichlorobenzene, 1,2,4-Trichlorobenzene, 4-Chloro-3-methylphenol, Acenaphthene, Pentachlorophenol and Pyrene in the unspiked sample, ECMP9, is qualified "J" and non-detects are flagged "UJ".

#### 7. FIELD BLANK AND FIELD DUPLICATE

No samples were field blanks or field duplicates. Results are not qualified based upon the results of the field blank or field duplicates.

Reviewed By: <u>A.C.Harvey/Lockheed-Martin ESAT</u>

Date: <u>November 18, 1998</u>

Case Number :

26593

SDG Number:

ECMP3

Site Name:

HIMCO DUMP (IN)

Laboratory:

IEA

#### HOLDING TIME

No problems found for this qualification.

#### 2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

No problems found for this qualification.

#### 3. CALIBRATION

The following volatile samples are associated with a continuing calibration whose corresponding initial calibration has percent relative standard deviation (%RSD) outside primary criteria. Hits are qualified "and non-detects are flagged "UJ".

Bromomethane, 2-Butanone VBLKE7, VHBLKE2

Chloroethane

ECMP3, ECMP4, ECMP5, ECMP6, ECMP7, ECMP8, ECMP9, ECMP9MS, ECMP9M ECMQ6, VBLKE4

The following volatile samples are associated with a continuing calibration percent difference (%D) outs primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Chloromethane, Tetrachloroethene

ECMP3, ECMP4, ECMP5, ECMP6, ECMP7, ECMP8, ECMP9, ECMP9MS, ECMP9MSD, ECMQ6, VBLKE4

1,1,2,2-Tetrachloroethane VBLKE7, VHBLKE2

The following semivolatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Hexachloroethane, 4-Nitrophenol, bis(2-Ethylhexyl)phthalate, Di-n-octylphthalate ECMP3, ECMP4, ECMP4DL, ECMP5, ECMP6, ECMP7, ECMP8, ECMP9MS, ECMP9MSD, ECMQ6, SBLKH5

2,4-Dimethylphenol, Hexachlorobutadiene, Hexachlorocyclopentadiene ECMP4DL

Reviewed By: A.C.Harvey/Lockheed-Martin ESAT

Date: November 18, 1998

ase Number :

26593

ite Name:

HIMCO DUMP (IN)

SDG Number:

ECMP3

Laboratory:

IEA

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Eight (8) soil samples, numbered ECMP3 through ECMP9, and ECMQ6 were collected on October 21, 1998. The lab received the samples on October 22, 1998 in good condition. All samples were analyzed for the volatile and semivolatile list of organic analytes. All were analyzed according to CLP SOW OLM03.2 3/90.

Reviewed By: A.C.Harvey/Lockheed-Martin ESAT

Date: November 18, 1998

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:			. **
SUBJECT:	Review of Data  Received for Review on <u>November 16, 1998</u>		
FROM:	Stephen L. Ostrodka, Chief (SRT-4J) Borns Superfund Technical Support Section	Iter Ostrocka erund 2 Payur 11/24/48	۷
TO:	Data User: <u>USACE</u>		
We have rev	viewed the data for the following case:		
SITE NAME	: HIMCO DUMP (IN)		
CASE NUM	BER: <b>26593</b>	SDG NUMBER:	ECMP3
Number and	Type of Samples: 8 Soils SYOC5 + 1	10Cz	
	nbers: <u>ECMP3 - ECMP9, ECMQ6</u>		
Laboratory:	IEA	_ Hrs. for Review:	8,5 + 0,
Following ar the d gualib	re our findings: ato are uscable our lacceptule histoire described in the att	de suit the	etive.

CC: Cecilia Luckett Moore

Region 5 TPO Mail Code: SM-5J

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

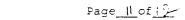
Data Set No:	CERCLIS NO: /N/054J
Case No: 36551	Site Name Location: Himeo Dump
Contractor or EPA Lab: Comput	hem Data User: US army Corp of Engineer
No. of Samples: Date	Sampled or Data Received: 11-3-98
If no, are traffic report or p of-custody record? Yes	g lists been received? Yes No acking list numbers written on the chain-
Are basic data forms in? Yes No of samples claimed: // No	No
Received by: Lightle Be	unit Date: 11-3-98
Received by LSSS: Spette	Burnett Date: 1/-3-98
	Reviewer Signature: Stoyland Tohn
Total time spent on review:	Date review completed: 11-10-98
Copied by: Synthe R	Durnell Date: 11-25-98
// _//	Burney Date: 11-25-98
DATA USER: Please fill in the blanks bel Sylvia Griffen, Data mgm	ow and return this form to: t. Coordinator, Region V, 55CRL
Data received by:	Date:
Data review received by:	Date:
Organic Data Complete [ ] Dioxin Data Complete [ ]	Suitable for Intended Purpose [ ] / if O. Suitable for Intended Purpose [ ] / if O. Suitable for Intended Purpose [ ] / if O. Suitable for Intended Purpose [ ] / if O.
<pre>PROBLEMS: Please indicate reauses.</pre>	asons why data are not suitable for you.
Received by Data Mgmt. Coordin	ator for Files. Data:

SDG: ECMK2

Site: Lab. : HIMCO DUMP, ELKHART

COMPUCHEM S. Tobin Reviewer: 11/09/98 Date:

Sample Number:	ECMK5		ECMK6	_	ECMK7		1		7	
Sampling Location:	SB16-2		SB16-6		SB16-60					
Matrix:	Soil		Soil		Soil		1			
Units:	ug/kg		ug/kg		ug/kg					
Date Sampled:	10/15/98	3	10/15/9	8	10/15/98	8	1			
%Moisture:	5		20		16					
PH:	7.8		6.2		7.7					
Dilution Factor:	1.0		1.0		1.0					
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flaç	Result	- Fla
Acenaphthene	350_		410_	- <del>-</del>	390_					
2,4-Dinitrophenol	870_		1000_		_990_				<u> </u>	
4-Nitrophenol	_870_		1000		_990_				i	
Dibenzofuran			410_		_390_					
2,4-Dinitrotoluene	_350_		410_						i —	
Diethylphthalate	350		64		46_	_J				
4-Chlorophenyl-phenylether	350		410_							
Fluorene	  350		410		390					
4-Nitroaniline			1000_		990		i			_
4,6-Dinitro-2-methylphenol	870		1000		990_		i			
N-Nitrosodiphenylamine	350_		410		390_		İ	<del></del>		
4-Promophenyl-phenylether	350		410		390_		,			
Hexachlorobenzene	350		410_		390					
Pentachlorophenol	  870		1000_		_990_		1		1	
Phenanthrene	100_		270_		  250		1		1	
Anthracene	350_		_53_		_57_	_J_	,			-
Carbazole	350_		410_		_390_		1			
Di-n-butylphthalate	350_		410_		390_					-
Fluoranthene	_210_		710_		_660_					
Pyrene	190_		670		610		j			
Butylbenzylphthalate	350		60_	_J_				<del></del>		
3,3'-Dichlorobenzidine	350		410		390_				i ————	
Benzo(a)anthracene	100	J	400_		_350_	_J_				
Chrysene	110	_J_			400		i			
bis(2-Ethylhexyl)phthalate	160_		270_	J	120_	_J_				
Di-n-octylphthalate	350_		_410_		390_		i			
Benzo(b) fluoranthene	1_120_		750_		430					
Benzo(k)fluoranthene	120		900_		_440_		}			
Benzo(a)pyrene	120_		_530_		450					
Indeno(1,2,3-cd)pyrene	82_		380_	J	360_	_J_				
Dibenz(a,h)anthracene	43_		160_		_150_	_J_				
Benzo(g,h,i)perylene	_89_	_J_			_250_	_J_				
	I		l				i		1	



Case #: 26551

SDG: ECMK2

Site:

HIMCO DUMP, ELKHART

Lab. :
Reviewer:
Date:

-	Sample Number:	ECMK5		ECMK6	. —	ECMK7		1		1	
	Sampling Location:	SB16-2		SB16-6		SB16-60					
	Matrix:	Soil		Soil		Soil		·		\ <del></del>	
	Units:	ua/ka		ug/kg		ug/kg		¦		!	
	Date Sampled:	10/15/98		10/15/98		10/15/98				i ———	
	%Moisture:	<b>10</b> , <b>1</b> 3, 30		20		116		<del></del>			
	PH:	7.8		16.2		7.7		· <del></del>			
	Dilution Factor:	1.0		11.0		1.0		i ———			
	Different ractor.	1.0		1		1					
	Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
• •	Phenol		- <del>U</del>	410	_U_	390_	_U_	!			
-	bis(2-Chloroethyl)ether	_350_		410_						i	
	2-Chlorophenol	350		410_		390	U				
	1,3-Dichlorobenzene	_350_	U			390_					
	1.4-Dichlorobenzene	350		98_	_J_	63_	_J_				
	1,2-Dichlorobenzene	350		410_		390_					
	2-Methylphenol		U								
1	2,2'-oxybis(1-chloropropan			410		390_	_U_				<del></del>
	4-Methylphenol	_350_		410_							
	N-Nitrosc-di-n-propylamine		U	410		390_	_U_				
	Hexachloroethane	_350_		410		390_		1			
	Nitrobenzene	350_		410		390	_u_				
	Isophorone	350					_U_				
	2-Nitrophenol	350	_U_	410_			U				
	2,4-Dimethylphenol	350		410_		390					
	bis(2-Chloroethoxy)methane					390_	_U_				
	2,4-Dichlorophenol	_350_		410_		390_					
	1,2,4-Trichlorobenzene	350_		410		390_		1			
1.00	Naphthalene	350		120_	_J_	130_		1			
	4-Chloroaniline	_350_	_u_	410		390					
	Hexachlorobutadiene	_350_	ับJ	410		390_					
	4-Chloro-3-methylphenol	350		410		390	_u_				
	2-Methylnaphthalene	350	_u_	410	_บ_	390	_ʊ_	1			
	Hexachlorocyclopentadiene	350		410		· — —				i	
	2,4,6-Trichlorophenol	350		410	_ʊ_	390					
	2,4,5-Trichlorophenol	870_	_u_	1000_		990	U				
	2-Chloronaphthalene	350				· <del></del>					
	2-Nitroaniline	870 .	~ "บ"	1000		990					
	Dimethylphthalate	350		· <del>-</del> -			_u_				
	Acenaphthylene	350_									
	2,6-Dinitrotoluene	350		410_		390					
	3-Nitroaniline	_870_		1000_		· — —	_U_	j			
		i -		i		j		i			



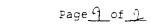
Case #: 26551

SDG: ECMK2

Site: Lab. : HIMCO DUMP, ELKHART

Lab.:
Reviewer:
Date:

Sample Number:	ECMK1		ECMKIDL		ECMK2		ECMK3		ECMK4	
Sampling Location:	SB20-6		SB20-6		SB03-0.5	5	SB03-2		SB20-0.	5
Matrix:	Soil		Soil		Soil		Soil		Soil	-
Units: -	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/15/98		10/15/98		10/12/98	3	10/12/98	3	10/15/9	8
%Moisture:	7		7		8		9		8	
PH:	7.5		7.5		6.4		6.2		6.5	
Dilution Factor:	1.0		15.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	   Result	- Flag
Acenaphthene	  _890_		880_		360_		  360		  _180_	 _J
2,4-Dinitrophenol	890_	UJ	13000		900_		_910_			
4-Nitrophenol	_890_		_13000_		_900_		910		900_	
Dibenzofuran	1500		1_1200_		360_		_360_		_360_	
2,4-Dinitrotoluene	350_		_5300_		360_		360_		360_	
Diethylphthalate	350		5300		_360_		360			
4-Chlorophenyl-phenylether	_350_		_5300_		360_		360_		360_	
Fluorene	2500_		2400		_360		_360_		360_	
4-Nitroaniline	_890_	_U_	13000		900		910_		900_	0
4,6-Dinitro-2-methylphenol	_890_	_ນJ	13000				910_			
N-Nitrosodiphenylamine	_350_	_ʊ_	_5300_		_360		360_		360	
4-Bromophenyl-phenylether	_350_		_5300_		_360_		_360_			
Hexachlorobenzene	_350_		5300		_360_		360_			
Pentachlorophenol	_890_	_ບປຸ	13000_		_900_		_910_		900_	
Phenanthrene	_19000_		18000		_360		360_		460_	
Anthracene	_3700_		4900_		360		360_		110	_J
Carbazole	_1500_		1700		_360_		360		_58_	
Di-n-butylphthalate	_350_	_U_	5300	U	360_	ָ דַ <u>'</u>	360_		360_	J_
Fluoranthene	_24000_		29000_		360_		360_		_i200_	
Pyrene	_31000_		_21000_		360_		_360_		1200_	
Butylbenzylphthalate	_350_	_UJ.	5300_	UJ	360_	U	360_		_360_	
3,3'-Dichlorobenzidine	_350_	_U_	5300_	_u_	]_360_	_UJ_	360_	_ັບJ	360_	u
Benzo(a) anthracene	_9800_		9700		360_		360_		780	
Chrysene	_9300_		9700_		_360_		_360_		_880_	
bis(2-Ethylhexyl)phthalate	81_	_J	5300_	_UJ	140_		360_	ັບJ	90	_J_
Di-n-octylphthalate	350_	_ບJ	5300_	U	_360_		360_		120_	_J_
Benzo(b) fluoranthene	_18000_		9700_		_360_		_360_	U	1200_	
Benzo(k) fluoranthene	_21000_~		10000_		360_		_360_		1200_	
Benzo(a)pyrene	12000_		11000		360		360_		1300	
Indeno(1,2,3-cd)pyrene	_6400_		7000_		360		360_		1200	
Dibenz(a,h)anthracene	_2000_		2600	_J_	360_		360_		450_	
Benzo(g,h,i)perylene	_5200_		7100_		360_				1000_	
	1		1				Ī		I	



Case #: 26551

SDG: ECMK2

Site:

HIMCO DUMP, ELKHART

Lab. : Reviewer: Date:

Ī	Sample Number:	ECMK1		ECMKIDL		ECMK2		ECMK3		ECMK4	- !
İ	Sampling Location:	SB20-6		SB20-6		SB03-0.5		SB03-2		SB20-0.5	
į	Matrix:	Soil		Soil		Soil		Soil		Soil	(
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
	Date Sampled:	10/15/98		10/15/98		10/12/98		10/12/98		10/15/98	1
į	%Moisture:	7		7		8		9		8	
,	PH:	7.5		7.5		6.4		6.2		6.5	
	Dilution Factor:	1.0		15.0		1.0		1.0		1.0	
i				İ							
j	Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ĺ				i i							1
m	Phenol	350_		5300	_U_	_360_	_U_	360_	_U_	_360_	_U
ţ	bis(2-Chloroethyl)ether	_350_	_U_	_5300_	_U_	360_	_u_	360_	_U	_360_	_U
	2-Chlorophenol	350_		_5300_	_U	_360_	_U_	360_	_ʊ	_360_	_U_
1	1,3-Dichlorobenzene	350_	_U_	<u> </u> _5300_	U	_360_	_U_	_360_	_U	_360_	_U_
ĺ	1,4-Dichlorobenzene	350_		5300			_U_	_360_	_U	]_360_	_U 1
	1,2-Dichlorobenzene	350_	_U_	_5300_	_U_	360_	_U_	360_	_u_	_360_	_U
٠.	2-Methylphenol	350_	_U_	5300	_U_	]_360_	_U_	]_360_	_U_	_360_	_U_
)	2,2'-oxybis(1-chloropropan	_350_	U	_5300_	U_	360_	_U_	360_	_U_	360_	_U_
المعا	4-Methylphenol	_350_		5300		360_		360_	_U_	360_	_U }
	N-Nitroso-di-n-propylamine	350_	U	_5300_	U	360_	_U_	360_	_U	360_	_U
	Hexachloroethane	_350_		5300		360_	U	360_	_U_	_360_	_U_
	Nitrobenzene	350_	_u_	_5300_	_u_	_360_	_U_	360_	_ʊ_	_360_	_U
	Isophorone	350_		5300	_U_	360_	_บ_	_360_	_ប_	_360_	_U !
	2-Nitrophenol	350_		5300_	_บ_	_360_	_U	360_	_U_	_360_	_U !
	2,4-Dimethylphenol	350_		_5300_	_บ	360	U	360_	_ʊ	360_	_U :
	bis(2-Chloroethoxy)methane			_5300_		360		360_		360	_U
	2,4-Dichlorophenol	350		_5300_		_360_		360_	U	360	_U
	1,2,4-Trichlorobenzene	_350_		5300		360_		360_	U	360_	U
, ten	Naphthalene	_2200_		2400	_J_	360_	U	360_			_U (
	4-Chloroaniline	350_	_U_	5300	U	360_	_บ_	360_	_U	360_	_U i
	Hexachlorobutadiene	_350_	_ບJ	5300	_ບJ_	360_	_U_	_360_	_U	360_	_UJ_ !
	4-Chloro-3-methylphenol	350_	U	5300	U	360_	_U_	360_	_υ	]_360_	_U
	2-Methylnaphthalene	1000_		970_	_J_	360	_u_	360_	U	1_360_	U
	Hexachlorocyclopentadiene	350	ַ	5300_		_360_		360_	_U_	_360_	_U_
	2,4,6-Trichlorophenol	350		5300	_U_	360		360_	_U_		_u
	2,4,5-Trichlorophenol	890_		13000_		900	U		U	900_	_บ_
	2-Chloronaphthalene	_350_		5300_		360		360_		360_	U
	2-Nitroaniline	890_	u	13000		900		910			_U_
	Dimethylphthalate	350		5300_			_u_			360_	_U
	Acenaphthylene	2300_		2100	J	_360_		360		_360_	ַ ט_
	2,6-Dinitrotoluene	_350_	ַָּט	5300		360		_360_			_U_ [
	•	890		-		_900_			U	900_	
				i _		i					_
_											



Case #: 26551

SDG: ECMK2

Site: Lab. : HIMCO DUMP, ELKHART

COMPUCHEM Reviewer: S. Tobin 11/09/98 Date:

Sample Number:	ECMJ7MSD		ECMJ8		ECMJ9		ECMKO		ECMKODL	
Sampling Location:	SB17-05		SB17-2		SB16-05		SB20-2		SB20-2	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/15/98		10/15/98		10/15/98		10/15/98		10/15/98	3
%Moisture:	8		5		6		8		8	
PH:	7		7.7		7.9		7.9		7.9	
Dilution Factor:	1.0		1.0		1.0		1.0		2.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flaç	Result	Flaç
Acenaphthene	  _570_		350_		350_	U		J	160_	
2,4-Dinitrophenol	900	UJ	870_		880_		_900_		1800	
4-Nitrophenol	920_		870_		880		900		1800	U
Dibenzofuran	_360_	_บ_	_350_		_350_		_170_		1_110_	_J_
2,4-Dinitrotoluene	600		350		350_		360_		720	U
Diethylphthalate	_360_		350		350_				720	_u_
4-Chlorophenyl-phenylether			350_		350		360			_ <u>n</u>
Fluorene			350_	U	350		_250_		180_	ألد سا
4-Nitroaniline	900		870	U	_880_		000_	UJ	1800	<b>Y</b> UJ.
4,6-Dinitro-2-methylphenol	_900_		870		880		900		1800_	U
N-Nitrosodiphenylamine			350_		_350_		_360_		720_	
4-Bromophenyl-phenylether	360		350				360_		_720_	_U_
Hexachlorobenzene	_360_		 		350_		360		720_	_U_
Pentachlorophenol	_510		870_				_900_		1800_	_v_ _vJ_
Phenanthrene	_130_		83_	_J_			_1900_	_••.	1400	
Anthracene	_360_		350		_350_		450_		350	
Carbazole	360		350_		_350		_280_		200_	
Di-n-butylphthalate	360		_350_		350_	U	360		720	 U
Fluoranthene	_320_				_91_		3100_		2100	
Pyrene	_990_		120		76_		_2500_		1700	
Butylbenzylphthalate	_360	UJ	350_	UJ	:		360_	11.1	720	
3,3'-Dichlorobenzidine	360		350		_350_		360_		720_	_u
Benzo(a)anthracene	180		_66_		39_		1700		1100_	
Chrysene			76_		47	_J_	1400		1100_	
bis(2-Ethylhexyl)phthalate			_36_	J	410		62_		720_	
Di-n-octylphthalate			_350_		350		360_			
Benzo(b) fluoranthene	200		55_	_J_	44	_J_	2800		1_1400	_u_
Benzo(k) fluoranthene	_250_		77_		50_		3200_		1200_	
Benzo(a) pyrene	250		62_		_50_  _53_		_3200_  _1700_		1_1200_	
Indeno(1,2,3-cd)pyrene	_220_		_ 52_   _58_	J		_J_	1_1700_	<del></del>		
Dibenz(a,h)anthracene	99		350		_350		450		960_	_J_
Benzo(g,h,i)perylene	170_		47_		39_		1_450_		_400_  _900_	
	l		l		I				i	

Case #: 26551

SDG: ECMK2

Site: Lab. : HIMCO DUMP, ELKHART

COMPUCHEM S. Tobín Reviewer: Date: 11/09/98

-	Sample Number:	ECMJ7MSD		ECMJ8		ECMJ9		ECMK0		ECMKODL	:
1	Sampling Location:	SB17-05		SB17-2		SB16-05	1	SB20-2		SB20-2	1
	Matrix:	Soil		Soil		Soil		Soil		Soil	i
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	1
i	Date Sampled:	10/15/98		10/15/98		10/15/98	İ	10/15/98		10/15/98	1
!	%Moisture:	8		5		6	1	8		8	ì
į	PH:	7		7.7		7.9		7.9		7.9	i
1	Dilution Factor:	1.0		1.0		1.0		1.0		2.0	!
:	Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
	Phenol	860		350_	<u>"</u>	350_	U	_360_		720_	
	bis(2-Chloroethyl)ether	360		350_		350_		360_		720_	_ʊ:
	2-Chlorophenol	880		350	_บ	350_	U	360_	U	720	_U_
	1,3-Dichlorobenzene	_360_		350		350_		_360_		720_	
	1,4-Dichlorobenzene	540		_350_	U	_350_		360_	_u_	720_	_U
	1,2-Dichlorobenzene	360_	_U_	350		_350_	_ʊ_	]_360_	_ʊ_	720_	_U_
	2-Methylphenol	360_	_ʊ_	350	U	350_	_ʊ_	_360_	_ʊ_	720_	_U
	2,2'-oxybis(1-chloropropan	360_	_บ_	350_	_บ_	1_350_	_u_	7360_	_ʊ_	720_	_ʊ_
	4-Methylphenol	360_		350_		]_350_		_50_		720_	_U
	N-Nitroso-di-n-propylamine	590_		1_350_	_U	_350_	_ʊ	360_	_ʊ	_720_	_U
	Hexachloroethane	1_360_	_u_	_350_		_350_		7-360-	_U_	720_	_u_
	Nitrobenzene	360_	_u_	350_		350_		360_		_720_	_U_
	Isophorone	360_	_U_	350_		350_		_360_		_720_	_U
	2-Nitrophenol	360_	_ʊ	350_		350_	_u_	_360_		720_	_U
	2,4-Dimethylphenol	_360_	_U_	350_		_350_	_u_	_360_		720_	_U <u>_</u>
	bis(2-Chloroethoxy)methane		_U	_350_		_350_		_360_	_U_	720_	_U_
	2,4-Dichlorophenol	1_360_		_350_		350_		_360_	_n_	_720_	_U_
	1,2,4-Trichlorobenzene	_560_		350_		350_		_360_		720_	_U
	Naphthalene	36_		_350_		350_	_U			_230_	_J
	4-Chloroaniline	360_		_350_		350_		_360_		_720_	_U_
	Hexachlorobutadiene	_360_	_UJ_			350_		_360_		720_	_UJ_
	4-Chloro-3-methylphenol	_890_		_350_	_U			_360_		720_	_U
	2-Methylnaphthalene	1_360_		_350_	_u		_U	_160_	_J_	120_	_J_
	Hexachlorocyclopentadiene	<u>.</u> 360_	_ū,_	_350_		_350_		_360_		720_	_U
	2,4,6-Trichlorophenol	_360_		1_350_		350_		_360_		720_	_u_
	2,4,5-Trichlorophenol	_900_		870_	_U	2880_		_900_		1_1800_	_U
	2-Chloronaphthalene	1_360_		350_	_U	1_350_			_u		_u_
	2-Nitroaniline	_900_ ~		_870_				_900_		1800_	_u_
	Dimethylphthalate	1_360_		350_				_360_		720_	_U
	Acenaphthylene	360_		1_350_		1_350_		_140_		100_	_J
	2,6-Dinitrotoluene	_360_	_ʊ_		_u_			360_			_U
	3-Nitroaniline	_900_	_U	_870_	_u_	880_	_U	_900_	_U	1800_	_U
		l		J				1			



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Case #: 26551

SDG: ECMK2

Site:

HIMCO DUMP, ELKHART

Lab. : Reviewer: Date:

Sample Number:	ECMJ4		ECMJ5		I DOWN		20175			
Sample Number:	SB19-0.5	:	SB19-2		ECMJ6   SB19-6		ECMJ7		ECMJ7MS	
Matrix:	Soil	,	Soil		1 .		SB17-05		SB17-05	
Units:	ug/kg		ug/kg		Soil		Soil		Soil	
Date Sampled:	10/15/98	<b>\</b>	ug/kg   10/15/98		ug/kg		ug/kg		ug/kg	
%Moisture:	110/15/98	5		5	10/15/98		10/15/98	3	10/15/98	3
PH:	16.8		10		33		8		8	
Dilution Factor:	•		6.3		9.1		7		7	
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flaç	Result	Flag	Result	Flaç	Result	Flag
Acenaphthene	_360_		370	U	490_		360		720_	- –
2,4-Dinitrophenol	920_		_920_		1200		900_		900	
4-Nitrophenol	920		920_		1200		900_		1200	
Dibenzofuran	360_		370		490_		_360_		_360_	_U_
2,4-Dinitrotoluene	360		370_		490_		360_		810	
Diethylphthalate	_360_	_บ_		_u_	490_		360		360_	_U_
4-Chlorophenyl-phenylether	_360_	_บ_	370_		_490_		_360_		360	_~~_
Fluorene	360		71_		_490_		_360_		_360_	_ ^
4-Nitroaniline	920		920_		1200		900_		_900	U
4,6-Dinitro-2-methylphenol	920		920_		_1200_		900		_900_	_~ UJ
N-Nitrosodiphenylamine	_360_		370		_490_		_360		360	_U_
4-Bromophenyl-phenylether	360_				490		360		_360_	
Hexachlorobenzene	360_		_370_		_490_	U			_360	
Pentachlorophenol	920		_920_						_640	_J_
Phenanthrene	160_	_J_			_190_	·_J_	380		170	_J
Anthracene	76_		170					J	360_	_U_
Carbazole	_360_		49_		_490_		_64_		_360_	1
Di-n-butylphthalate	_95_		37_		_490_		_360_		_360_	_
Fluoranthene	490		1700		_490_		_760_		_390_	_ '—
Pyrene	_530		1900_		420		_510_	J	_1300_	
Butylbenzylphthalate	_360		_370_	UJ			_360_		_360_	UJ
3,3'-Dichlorobenzidine	360		_370_				_360_		_360_	U
Benzo(a)anthracene			1100_		_330_		_260_			_J_
Chrysene	_300		_970_		_380_ ·		_330_		_240_	
bis(2-Ethylhexyl)phthalate	73	_J_	_160_	_J_	_170_		_51_		_140_	_J_
Di-n-octylphthalate	_360_		370_		130		_360_		360	
Benzo(b) fluoranthene	380		_1700_		_690_		_280_		400	_00.
Benzo(k) fluoranthene	_360_		_2100_		_830_		_340		_480_	
Benzo(a) pyrene	_430_		1400		_480_		_340_  _280_		_ <del>1</del> 00_  _290_	7
Indeno(1,2,3-cd)pyrene			_1100_		_410_		270_		240	_ <sup>J</sup>
Dibenz (a,h) anthracene	_130_		360_	_J_			120_			_J
Benzo(g,h,i)perylene	340		940_		400_	_J_	  220		_110_  _180_	_J
						~~~	_220_		_+00	_J_



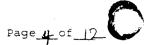
SDG: ECMK2

Site: HIMCO DUMP, ELKHART

Lab.: COMPUCHEM Reviewer: S. Tobin Date: 11/09/98

-	Sample Number:	ECMJ4		ECMJ5		ECMJ6		ECMJ7		ECMJ7MS	
	Sampling Location:	SB19-0.5	5	SB19-2		SB19-6		SB17-05		SB17-05	
	Matrix:	Soil		Soil		Soil		Soil		Soil	1
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	ĺ
	Date Sampled:	,   10/15/98	3	10/15/98		10/15/98		10/15/98		10/15/98	; ;
	%Moisture:	110		10		33		8		8	i
	PH:	6.8		6.3		9.1		7		7	i
	Dilution Factor:	1.0		1.0		1.0		1.0		1.0	i
				, _ · ·							- 1
•	Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
,	Phenol .			370_		490_		  360_		1200_	
	bis(2-Chloroethyl)ether	360_		370_		490_		360		360_	_U_
	2-Chlorophenol	360		370_		490_		_360_		  1100	;
	1,3-Dichlorobenzene	360_		370_	- <u>-</u> -			_360_		360	_ט_
	1,4-Dichlorobenzene	360		370_		490		360_		690_	
	1,2-Dichlorobenzene	360_		370_		490_				_360_	_U_
	2-Methylphenol	360_		370_		490_				360	
ì	2,2'-oxybis(1-chloropropan	360		370_		490_		_360_		_360_	U
•	4-Methylphenol	360		370_		490_		360_		360_	
	N-Nitroso-di-n-propylamine	. — —		370_				360_		800_	
	Hexachloroethane	_360_		370_		490_		360_		360_	_u_
	Nitrobenzene	360_		  370		490_		360_		360_	U
	Isophorone	_360_  _360_	0	370_		490_		360_		]_360_	_U_
	2-Nitrophenol	360		_370_  _370_		490_		360		_360_  _360_	
	2,4-Dimethylphenol	360_		_370_  _370_		490_		360_		360_	_u_
	bis(2-Chloroethoxy) methane	360		_370_  _370_		490_		_360_  _360_	_UU	360_	
	2,4-Dichlorophenol	360_		_370_   _370_		490_					
	1,2,4-Dichiolophenol						_U	_360_ {_360_	_U_	1_360_ 1_750_	_U_
	Naphthalene	360 <u> </u>		_370_  _370		_490_   _490_		360_	ʊ		 _J_
	4-Chloroaniline	360_	_U			<u>_4</u> 90_   _490_		_360_		360_	
	4-Chrofodhiline   Hexachlorobutadiene	360_		_370_   _370_						360_	
				370_		490_		_360_			_nj
	4-Chloro-3-methylphenol	_360_	_u	370_	_n		_ŭ			1300_	U
	2-Methylnaphthalene	360_		370_		490_		360_		360_	
	Hexachlorocyclopentadiene	1_360_		370		490_		360_		_360_	_u_
	2,4,6-Trichlorophenol	360_	_u		_ <u>u</u> _	· — —	_n	360_	_ <u>u</u> _	360_	_u_
	2,4,5-Trichlorophenol	920_		920_		1200_		_900_		900_	_u_
	2-Chloronaphthalene	_360_		370_		_490_		360_		_360_	_U
	2-Nitroaniline	_920_		_920_	_u_	· <del>-</del>	U	_900_		900_	_U \
	Dimethylphthalate	_360_		370_		490_		_360_		_360_	_U [
	Acenaphthylene	_96_		290_		_490_		360_		_360_	_u_
	2,6-Dinitrotoluene	_360_		_370_	_U_	_490_	_u		_u_	_360_	_u_
	3-Nitroaniline	_920_	_U	920_	_U	1200_	_U	_900_	_Ŭ_	_900_	_U
		l		1		1		1		1	





SDG: ECMK2

Site:

HIMCO DUMP, ELKHART

Lab.: COMPUCHEM Reviewer: S. Tobin Date: 11/09/98

Sampling Location:   Shi6-60	Sample Number:	ECMK7						<del></del>			
Matrix:   Soil										<u> </u>	
Units:										ļ <del></del>	
Date Sampled:   10/15/98	1	•		!				1		}	
Moisture:   16   PH:			2					¦		·	
PH:   Dilution Factor:	•	•	5			1				ļ	<del></del>
Dilution Factor:   1.0		1 10								-	
Volatile Compound	1	110									
Chloromethane	Dilucion Factor:	1.0		! !							
Bromomethane	Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Decimination   12	Chloromethane	12		! <del></del> 		' ———— 		¦			
Vinyl Chlorotde	Bromomethane						. ——				
Chloroethane	Vinyl Chloride										
Methylene Chloride         25         U           Acetone         14         U           Carbon Disulfide         2         J           1,1-Dichloroethene         12         U           1,1-Dichloroethane         2         J           Total 1,2-Dichloroethene         12         U           1,2-Dichloroethane         12         U           1,2-Dichloroethane         12         U           1,1,1-Trichloroethane         12         U           1,1,1-Trichloroethane         12         U           Carbon Tetrachloride         12         U           Bromodithloromethane         12         U           1,2-Dichloropropane         12         U           1,2-Dichloropropane         12         U           1,1,2-Trichloroethane         12         U           2-Dibrhoroethane         12         U           1,1,2-Trichloroethane         12         U           Benzene         4         J           Trans-1,3-Dichloropropene         12         U           Bromoform         12         U           2-Hexanone         12         U           2-Hexanone         12         U	•										
Acetone	Methylene Chloride							i			
Carbon Disulfide											
1,1-Dichloroethane	Carbon Disulfide			i							
1,1-Dichloroethane	1,1-Dichloroethene			1				i		,	- ( i
Total 1,2-Dichloroethene	1,1-Dichloroethane	2		]							
Chloroform	Total 1,2-Dichloroethene						•				
1,2-Dichloroethane	Chloroform			·			· <del></del>				
2-Butanone	1,2-Dichloroethane			1		i ————		[		1	
1,1,1-Trichloroethane	2-Butanone							i			
Carbon Tetrachloride	1,1,1-Trichloroethane					i	. —			1	
Bromodichloromethane	Carbon Tetrachloride					,		1		j	
1,2-Dichloropropane	Bromodichloromethane					 	· <del></del>			[	
Cis-1,3-Dichloropropene       12       U         Trichloroethene       12       U         Dibromochloromethane       12       U         1,1,2-Trichloroethane       12       U         Benzene       4       J         Trans-1,3-Dichloropropene       12       U         Bromoform       12       U         4-Methyl-2-pentanone       12       U         2-Hexanone       12       U         Tetrachloroethene       12       U         1,1,2,2-Tetrachloroethane       12       U         Toluene       12       U         Chlorobenzene       12       U         Ethylbenzene       14       U         Styrene       12       U         Xylene (total)       9       J	1,2-Dichloropropane										
Trichloroethene	Cis-1,3-Dichloropropene	12_									
Dibromochloromethane	Trichloroethene										
1,1,2-Trichloroethane	Dibromochloromethane	12_					. —				
Benzene	1,1,2-Trichloroethane	12_		1		1					
Trans-1,3-Dichloropropene   12	Benzene	4_								1	
Bromoform	Trans-1,3-Dichloropropene			1		1				1	
4-Methyl-2-pentanone     12     U       2-Hexanone     12     U       Tetrachloroethene     12     U       1,1,2,2-Tetrachloroethane     12     U       Toluene     12     U       Chlorobenzene     12     U       Ethylbenzene     14       Styrene     12     U       Xylene (total)     9     J	Bromoform	12_		1				1			
Tetrachloroethene	4-Methyl-2-pentanone	1_12_	U	1							
Tetrachloroethene	2-Hexanone					1					
1,1,2,2-Tetrachloroethane	Tetrachloroethene										
Toluene	1,1,2,2-Tetrachloroethane	12						1		1	
Chlorobenzene	Toluene									1	
Ethylbenzene	Chlorobenzene							1			
Styrene	Ethylbenzene										
Xylene (total)	Styrene		_บ_								
	Xylene (total)										
	<u> </u>										



Fage 3 of i

Case #: 26551

SDG: ECMK2

Site: HIMCO DUM

Lab.: Reviewer: Date: HIMCO DUMP, ELKHART

	Sample Number:	ECMK2		ECMK3		ECMK4		ECMK5		ECMK6	
	Sampling Location:	SB03-0.5		SB03-2		SB20-0.5		SB16-2		SB16-6	
	Matrix:	Soil		Soil		Soil		Soil		Soil	
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
	Date Sampled:	10/12/98		10/12/98		10/15/98		10/15/98	1	10/15/9	8
	%Moisture:	8		9		8		5		20	-
	PH:	i		Ì		j					'
	Dilution Factor:	1.0		1.0		1.0		1.0		1.0	
		i		į		ì		İ		i	
	Volatile Compound	Result	Flag	Result	Flac	Result	Flag	Result	Flac	Result	Flac
			-	ĺ	•		•	·	•	İ	• .
	Chloromethane	_11_	UJ	111	UJ	11_	U	10_	U	12_	U
•	Bromomethane	11		  11		111		10_		12_	U
	Vinyl Chloride	111_		111		111	U		U		_u_ :
	Chloroethane	111		11_		1_11_		10_		12_	_U ,
	Methylene Chloride	34_		18_		13_				13	_U_
	Acetone	_2_	_J_			111				12_	
	Carbon Disulfide	111_		11_		111		10_		12_	_U
	1,1-Dichloroethene	111_		11_	u			10_		12_	_u
j	1,1-Dichloroethane	1_11_		11	U					1_1_	_J
	Total 1,2-Dichloroethene	11_				111_		10_		12_	_u_
	Chloroform	1_11_		11_		111		1_10_		12_	_u_
	1,2-Dichloroethane	11_		1_11_		111		10		12_	_u_
	2-Butanone	11_		_11_		111_		10		12_	_U
	1,1,1-Trichloroethane	111		11_		1_11_				12_	_U
	Carbon Tetrachloride	11_		_11_		11_		10_	Ū,	12_	_v_
	Bromodichloromethane	11_		11_		11_		_10_		12_	
	1,2-Dichloropropane	111		_11_		111		10_		12	
	Cis-1,3-Dichloropropene	11_		11_		111		10_		12	U
r+	Trichloroethene	1_11_		_11_		1_11_		10_		12.	U
	Dibromochloromethane	_11_		1_11_	_U_	1_11_	_U_		_U_	12_	_U
	1,1,2-Trichloroethane	11_	_U_	_11_	_U	111_	_U_	10_	_U	12_	_u_
	Benzene	1_11_	_U	_11_	_U_	111_	_U_	10_	_U_	3_	_J_
	Trans-1,3-Dichloropropene	1_11_	_U	11_	_U_	_11_	_U_	1_10_	_U	12_	_U_
	Bromoform	11_	_U_	1_11_	_u_	11_	_U	10_	_U_	12_	_U_
	4-Methyl-2-pentanone	11_	_UJ_	11_	_ບJ_	11_	_U_	1_10_	_U		_U_
	2-Hexanone	1_11_	_ບJ_	11_	_ບJ_	11_	_u_		_U	_12_	_U_
	Tetrachloroethene	11_	_ʊ	11_	_ʊ_	_11_	_U_	1_10_	_U_	12_	_U_
	1,1,2,2-Tetrachloroethane	1_11_	_ʊ_	_11_	_U	1_11_	_U_	10_	_U_	12_	_U_
	Toluene	11_		_11_	U	11_	U	10_	_u_		
	Chlorobenzene	_11_	_ʊ_	11_	_ʊ	11_		_10_	_U_	12_	_บ
	Ethylbenzene	11_		1_11_	_ʊ_	11_					
	Styrene	111_	_u_	_11_	_U_	11_	U			12_	_U_
	Xylene (total)	11_	_ʊ_	1_11_	_U_	111_	_U_	10_	_บ	7_	_J
				1							





SDG: ECMK2

Site:

HIMCO DUMP, ELKHART

Lab. :
Reviewer:
Date:

Sample Number:	ECMJ9		ECMJ9MS	<del></del>	ECMJ9MSI		ECMKO		ECMK1	
Sampling Location:	SB16-05		SB16-05		SB16-05		SB20-2		SB20-6	
Matrix:	Soil		Soil		Soil		Soil		Soil	
Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Date Sampled:	10/15/98	3	10/15/9	8	10/15/98	В	10/15/9	8	10/15/9	8
%Moisture:	6		6		6		8		7	
PH:	1		ł		Ī		İ		i	
Dilution Factor:	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Chloromethane	1_11_		  11	<del></del>	   _11_		   _11_		11_	
Bromomethane	111_		11_		1_11_		1_11_			-
Vinyl Chloride	1_11_		11_		1_11_		1_11_		11-	_U
Chloroethane	1_11_		1_11_		1_11_				_11_	_UJ_
Methylene Chloride	18_		1_11_	u			_11_   _17_		1_11_	_U
Acetone			1_11_		1_11_		1_2_		1-17-	_ <u>u</u>
Carbon Disulfide	11_		111_	_u_			1_1_		_2_	_J
1,1-Dichloroethene	111		45_		_46_		1_11_	_U		٠
1,1-Dichloroethane	111_		11_	7.7	1_11_		_ <del></del>	_u		$\mathcal{A}_{i}$
Total 1,2-Dichloroethene	_11_		1_11_		_11_					<u></u>
Chloroform	11_		1 _ 11 _		_++_		_11_			_U
1,2-Dichloroethane	111		1_11_		  11		111_		_11_	_ <u>"</u> _
2-Butanone	11_		111_				_11_		_11_	_u
1,1,1-Trichloroethane	11_	_n_ 	1_11_		_11_		_11_		_11_	_UJ_
Carbon Tetrachloride	111_	_n			_11_  _11_		_11_	_	_11_	_ <u>u_</u> _
Bromodichloromethane	1_11_		1_11_				_11_			
1,2-Dichloropropane	11_		1_11_		_11_  _11_		-11-		_11_	- <u>''</u> -
Cis-1,3-Dichloropropene	11_	_5_		_U_		- <u>'</u> '-	_11_		_11_	_ U
Trichloroethene	11_			_u			1_11_			_
Dibromochloromethane	11_	_IJ			44_		1-11-		1_11_	
1,1,2-Trichloroethane			_11_	_u	_11_	_u			_11_	_U_
Benzene	_11_		_11_	_U_	. — —		1_11_		11_	_ <sup>U</sup> _
Trans-1,3-Dichloropropene	111_		47_	<del></del>	_49_		_11_		_11_	_n_
Bromoform	_11_		_11_		_11_	_U_		_U		_ <sup>IJ</sup>
	1-11-				_11_		11	_u		_U
4-Methyl-2-pentanone	11_		_11_		1_11_		_11_		1_11_	_UJ_
2-Hexanone Tetrachloroethene	_11_		_11_		111_		_11_		_11_	_UJ_
	11_		1-11-	_ <sup>U</sup>	1_11_		11_		11_	_u_
1,1,2,2-Tetrachloroethane		U_		U	_11_	_U_	_11_		-11_	_U_
Toluene	_11_		_45_		_46_		11_		11_	_U_
Chlorobenzene	111_	_ <del>U</del>	_46_		48_		_11_		_11_	_U
Ethylbenzene	111_	U	_11_	_u_			1-11-		_11_	_U
Styrene	_11_	_U_	11_	_u_				_U_	1_11_	_U
Xylene (total)	_11_	_u	_11_	_U_	_11_	_u_	_11_	_U	_11_	_u_
	l									

Case #: 26551

SDG: ECMK2

Site:

HIMCO DUMP, ELKHART

Lab.: Reviewer: Date:

_											
	Sample Number:	ECMJ4		ECMJ5		ECMJ6		ECMJ7		ECMJ8	
	Sampling Location:	SB19-0.5		SB19-2		SB19-6		SB17-05		SB17-2	]
	Matrix:	Soil		Soil		Soil		Soil		Soil	İ
	Units:	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
	Date Sampled:	10/15/98		10/15/98		10/15/98		10/15/98		10/15/98	
	%Moisture:	10		10		33		8		5	1
	PH:	j		j		ļ		1		1	1
	Dilution Factor:	1.0		1.0		1.0		1.0		1.0	ĺ
		i		İ		Ì		1		1	1
i	Volatile Compound	Result	Flac	Result	Flag	Result	Flag	Result	Flag	Result	Flag
	i	i	_	Ì							
14   4	Chloromethane	11_	UJ	111_	บม	_15_	_ບປ	11_	ບJ_	10_	_U_
	Bromomethane	11_		_11_	ַ ָּบ_	_15_	U	_11_	_U_	10_	_U
	Vinyl Chloride	11_		11_		15_		_11_		1_10_	U \
	Chloroethane	11_	_U_	11_		_15_	_U_	1_11_	_บ	1_10_	_U
	Methylene Chloride	19_	_U_	75_		57_		_20_	_U_	_10_	_U
	Acetone	1_2_	_J_	4_	_J	_7_	_J_	_3_	_J_	10_	_UJ_
	Carbon Disulfide	1_11_		11_		15_	_U_	1_11_	_u_		_U }
	1,1-Dichloroethene	_11_		1_11_		_15_	_U	_11_	_U_	10_	_U [
	1,1-Dichloroethane	11_	_U_		_บ_	_15_	_U_	_11_	_u_	1_10_	_U
	Total 1,2-Dichloroethene	_11_	_U_	111_	_U_	1_15_	_U	1_11_	_u	10_	_U
	Chloroform	11_	_U_	11_	_u_	15_	_U_	1_11_	_IJ	10_	_ʊ_
	1,2-Dichloroethane	11_	_U_	111_	_U_	15_	_U_	111_	_U_	10_	_U [
	2-Butanone	111	UJ_	11_	ຼັບJຼ	15_	_UJ_	111_	_೮೨ೢ	_10_	_U [
	1,1,1-Trichloroethane	11_	_U_	11_	_ʊ_	1_15_	_U_	11_	_U_	10_	_U_
	Carbon Tetrachloride	_11_	_U_	11_	_U_	_15_	_U	11_	_u_	_10_	_U
	Bromodichloromethane	1_11_	_U_	111_	_u_	_15_	_u_	1_11_	_U_	10_	_U
	1,2-Dichloropropane	_11_	_U_	11_	_U_	1_15_		_11_	_บ_	10_	_U_
	Cis-1,3-Dichloropropene	1_11_		[_11_		1_15_	_บ	1_11_	_ʊ_	10_	_U (
	Trichloroethene	_11_	_U_	_11_	_U_	1_15_	_U	111_	_U_	1_10_	_U
	Dibromochloromethane	_11_	_U_	11_	_U_	_15_	_u_	11_	_u_	10_	_U_
	1,1,2-Trichloroethane	1_11_	_U_	1_11_	_U_	1_15_		11_	_u_	1_10_	_u
	Benzene	111_		11_	U	_15_	_u	111_		10_	_U
	Trans-1,3-Dichloropropene	1_11_	_U_	1_11_	_u_	15_		_11_		1_10_	_U [
	Bromoform	_11_	_ט_	1_11_		15_		11_		1_10_	_U
	4-Methyl-2-pentanone	11_	_UJ_	11_		_15_		11_		1_10_	_U
	2-Hexanone	1_11_	_UJ_	1_11_	_ບJ.	1_15_		1_11_		1_10_	_n_
	Tetrachloroethene	1_11_	_ʊ_	_11_	_U	1_15_		_11_		1_10_	_U
	1,1,2,2-Tetrachloroethane	11_	u_	11_	_U_	1_15_	_ʊ	_11_	_u_	1_10_	_U
	Toluene	111_	_ʊ_	111_	U	_15_	_U_	_11_	_ʊ_	10_	_U
	Chlorobenzene	11_	U	11_	_ʊ	15_	U		_u_		_U
	Ethylbenzene	1_11_	U	11_	_U_		_บ	11_	_U_	10_	_U
	Styrene	111_		11_	U	_15_	_ʊ_	11_	_U	10_	_U
	Xylene (total)	11_	U				_u_	1_11_	_ʊ	1_10_	U
1				l						l	
1											**



Semivolatile Analysis Data - ECMKO Tentatively Identified Compounds

CASE NO: 26551 SDG NO: ECMK2 LABORATORY: COMPUCHEM

UNKNOWN (BC) CYCLOPENTAPHENANTHRENE		
CYCLODENTADUENANTUDENE	5.29	240.000
LICLOPENTAPHENANTHKENE	14.90	310.000
ANTHRACENEDIONE	15.29	200.000
BENZOFLUORENE	16.93	350.000
METHYLPYRENE	17.25	230.000
UNKNOWN	17.67	260.000
BENZANTHRACENONE	17.82	240.000
BENZONAPHTHOTHIOPHENE	17.98	260.000
UNKNOWN	18.04	280.000
UNKNOWN	18.18	210.000
UNKNOWN	18.60	210,000
UNKNOWN	19.06	220.000
METHYLBENZANTHRACENE	19.12	270.000
METHYLCHRYSENE	19.19	220.000
UNKNOWN	19.33	470.000
UNKNOWN	19.48	230.000
UNKNOWN	19.66	320.000
UNKNOWN	19.75	230.000
UNKNOWN	19.93	410.000
UNKNOWN	20.04	330.000
BENZOFLUORANTHENE	20.32	480.000
UNKNOWN	20.41	230.000
UNKNOWN	20.48	350.000
BENZOFLUORANTHENE	20.58	870.000
METHYLBENZACEANTHRYLENE	20.85	330.000
UNKNOWN	20.90	230.000
UNKNOWN	21.00	230.000
UNKNOWN	21.19	390.000
UNKNOWN	21.30	280.000
UNKNOWN	21.44	280.000
UNKNOWN	21.66	250.000

7.75°

Semivolatile Analysis Data - ECMK1DL Tentatively Identified Compounds

CASE NO: 26551 SDG NO: ECMK2 LABORATORY: COMPUCHEM

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION
	METHYLANTHRACENE	14.72	1200.000
	METHYLPHENANTHRENE	14.75	1100.000
	CYCLOPENTAPHENANTHRENE	14.89	2800.000
	PHENYLNAPHTHALENE	15.26	1400.000
	UNKNOWN	15.80	1100.000
	UNKNOWN	16.09	1200.000
	BENZOFLUORENE	16.92	1800.000
	UNKNOWN	18.03	1900.000
	METHYLCHRYSENE	19.11	1300.000
	UNKNOWN	19.64	1300.000
	UNKNOWN	19.92	1400.000
	BENZOFLUORANTHENE	20.29	3100.000
	UNKNOWN	20.40	1400.000
*	UNKNOWN	20.46	2300.000
	PERYLENE	20.55	7200.000
	UNKNOWN	20.82	2100.000
	UNKNOWN	20.87	1500.000
	UNKNOWN	20.97	1800.000
	UNKNOWN	21.04	1500.000
	UNKNOWN	21.16	2000.000
	UNKNOWN	21.27	1700.000
	UNKNOWN	21.39	2200.000
	UNKNOWN	22.20	2300.000
	UNKNOWN	22.34	2600.000
	DIBENZANTHRACENE	22.78	1400.000
	DIBENZANTHRACENE	22.85	1400.000
	INDENOPYRENE	23.32	1500.000
	NAPHTHOCHRYSENE	25.90	1500.000
	DIBENZONAPHTHACENE	26.12	1100.000
	UNKNOWN	27.17	1400.000

FILE NAME: ECMK2.SDG DATE: 10/30/98 TIME: 14:19 CADRE98

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Semivolatile Analysis Data - ECMKODL Tentatively Identified Compounds

CASE NO: 26551 SDG NO: ECMK2

CAS NUMBER	COMPOUND NAME	RŤ	ESTIMATED CONCENTRATION	۵
	UNKNOWN (BC)	5.26	220,000	
	METHYLANTHRACENE	14.72	240.000	
	METHYLANTHRACENE	14.75	210.000	
	CYCLOPENTAPHENANTHRENE	14.89	420.000	
	PHENYLNAPHTHALENE	15.26	280,000	
	UNKNOWN	15.75	190.000	
	CYCLOPENTAPHENANTHRENONE	15.80	210.000	
	BENZONAPHTHOFURAN	16.53	210.000	
	BENZOFLUORENE	16.90	380,000	
	UNKNOWN	17.66	270.000	
	BENZANTHRACENONE	17.79	250.000	
	BENZONAPHTHOTHIOPHENE	17.96	240,000	
	UNKNOWN	18.03	210.000	
	BENZANTHRACENONE	18.15	180.000	
	UNKNOWN	18.76	230.000	
	METHYLBENZANTHRACENE	19.09	240.000	
	UNKNOWN	19.30	300.000	
	UNKNOWN	20.04	260.000	
	BENZOPYRENE	20.29	420.000	
	UNKNOWN	20.46	470.000	
	BENZOPYRENE	20.53	1000.000	
	UNKNOWN	20.80	260.000	
	UNKNOWN	20.87	240.000	
	UNKNOWN	20.97	190.000	
	UNKNOWN	21.02	200.000	
	UNKNOWN	21.14	310.000	
	UNKNOWN	21.27	180.000	
	UNKNOWN	22.19	200.000	
	UNKNOWN	22.34	260.000	
	DIBENZPYRENE	25.90	320.000	
	NAPHTHOCHRYSENE	26.12	210.000	
LE NAME	: ECMK2.SDG DATE: 10/30/98 TIME: 14:19 CADRE98		PAGE	. 1

Semivolatile Analysis Data - ECMK4 Tentatively Identified Compounds

CASE NO: 26551 SDG NO: ECMK2

LABORATORY: COMPUCHEM

CAS IUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION
	UNKNOWN (BC)	5.35	230.000
	BENZOFLUORENE	17.01	160.000
	UNKNOWN	17.77	140.000
	UNKNOWN	18.14	150,000
	UNKNOWN	18.70	130.000
	UNKNOWN	18.87	140.000
	FLUORANTHENAMINE	18.95	140.000
	METHYLCHRYSENE	19.23	140.000
	UNKNOWN	19.38	140.000
	UNKNOWN	19.44	210.000
	UNKNOWN	19.50	160.000
	UNKNOWN	20.04	530.000
	UNKNOWN	20.19	300.000
	UNKNOWN PHTHALATE	20.36	290.000
	BENZOPYRENE	20.42	430.000
	UNKNOWN PHTHALATE	20.49	290.000
	UNKNOWN	20.58	340.000
	PERYLENE	20.68	830.000
	UNKNOWN	20.95	280.000
	UNKNOWN	21.00	190.000
	UNKNOWN	21.13	280.000
	UNKNOWN	21.18	220.000
	UNKNOWN	21.29	200.000
	UNKNOWN	21.40	190.000
	UNKNOWN	21.56	200.000
	UNKNOWN	22.52	150.000
	BENZOCHRYSENE	22.98	150.000
	BENZOCHRYSENE	23.50	170.000
	UNKNOWN	23.75	270.000
	UNKNOWN	25.92	200.000
	UNKNOWN	26.20	150.000



Semivolatile Analysis Data - ECMJ4 Tentatively Identified Compounds

CASE NO: 26551 SDG NO: ECMK2

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN (BC)	5.36	250.000	_
	UNKNOWN	5.71	160.000	
	UNKNOWN	17.76	80.000	
	BENZOFLUORANTHENE	18.15	84.000	
	INDENOQUINOLINE	18.96	80.000	
	METHYLCHRYSENE	19.14	100.000	
	METHYLCHRYSENE	19.21	120.000	
	METHYLBENZANTHRACENE	19.28	96.000	
	UNKNOWN	19.38	110.000	
	UNKNOWN	19.45	120.000	
	UNKNOWN	19.50	110.000	
	UNKNOWN	19.77	190.000	
	UNKNOWN	20.04	200.000	
	BENZOPYRENE	20.41	360.000	
	BENZOPYRENE	20.67	440.000	
	UNKNOWN	20.94	270.000	
	UNKNOWN	21.00	240.000	
	UNKNOWN	21.14	240.000	
	UNKNOWN	21.29	220.000	
	UNKNOWN	21.41	250.000	
	UNKNOWN	21.54	270.000	
	UNKNOWN	21.81	180.000	
	UNKNOWN	22.15	100.000	
	UNKNOWN	22.35	170.000	
	BENZOPERYLENE	22.52	140.000	
	UNKNOWN	22.98	150.000	
	UNKNOWN	23.10	110.000	
	UNKNOWN	23.76	280.000	
	UNKNOWN	25.14	130.000	
	UNKNOWN	25.92	100.000	
	UNKNOWN	26.19	110.000	

Semivolatile Analysis Data - ECMK7

Tentatively Identified Compounds LABORATORY: COMPUCHEM

COMPOUND **\**\$ **ESTIMATED** Q ABER NAME RT CONCENTRATION 5.36 290.000 UNKNOWN (BC) 260.000 TRIMETHYLBENZENE 6.04 UNKNOWN 12.44 330.000 UNKNOWN 14.69 510.000 UNKNOWN 15.40 190.000 10544-50-0 SULFUR, MOL. (S8) 15.95 1700.000 UNKNOWN 230.000 16.24 UNKNOWN 16.46 260.000 UNKNOWN 170.000 16.63 METHYLTRIPHENYLENE 19.21 170.000 UNKNOWN 19.38 170.000 UNKNOWN 19.45 190.000 UNKNOWN 180.000 19.50 UNKNOWN 19.77 280.000 200.000 UNKNOWN 19.87 UNKNOWN 20.13 340.000 UNKNOWN 20.18 250.000 BENZOPYRENE 460.000 20.41 UNKNOWN 20.48 260.000 UNKNOWN 20.58 300.000 BENZOFLUORANTHENE 20.65 490.000 UNKNOWN 280.000 20.94 UNKNOWN 20.99 350.000 UNKNOWN 21.11 180.000 UNKNOWN 21.14 320.000 UNKNOWN 21.29 250.000 UNKNOWN 21.39 300.000 UNKNOWN 21.54 310.000 UNKNOWN 22.34 220.000 UNKNOWN 22.51 200.000 UNKNOWN 23.76

LE NAME: ECMK2.SDG DATE: 10/30/98 TIME: 14:19 CADRE98

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SDG NO: ECMK2

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180.000

Semivolatile Analysis Data - ECMJ5 Tentatively Identified Compounds

CASE NO: 26551 SDG NO: ECMK2

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	VOA TCL	4.59	130.000	
	UNKNOWN (BC)	5.37	320.000	
	UNKNOWN	5.71	150.000	
	CYCLOPENTAPHENANTHRENE	14.98	160.000	
	UNKNOWN CARBOXYLIC ACID	15.12	120.000	
	ANTHRACENED I ONE	15.37	130.000	
	CYCLOPENTPHENANTHRENONE	15.90	120.000	
	BENZOFLUORENE	16.99	270.000	
	UNKNOWN	17.74	330.000	
	BENZANTHRACENONE	17.89	170.000	
	BENZONAPHTHOTHIOPHENE	18.06	180.000	
	UNKNOWN	18.13	190.000	
	METHYLCHRYSENE	19.19	150.000	
	UNKNOWN	19.36	120.000	
	UNKNOWN	19.39	110.000	
	UNKNOWN	19.73	130.000	
	UNKNOWN	20.56	220.000	
	BENZOPYRENE	20.64	890.000	
	UNKNOWN	20.91	180.000	
	UNKNOWN	20.98	150.000	
	UNKNOWN	21.08	120.000	
	UNKNOWN	21.13	130.000	
	UNKNOWN	21.27	210.000	
	UNKNOWN	21.39	120.000	
	UNKNOWN	21.52	190.000	
	UNKNOWN	22.33	240.000	
	DIBENZPHENANTHRENE	22.93	130.000	
	UNKNOWN	23.09	120.000	
	DIBENZOCHRYSENE	23.48	170.000	
	UNKNOWN	23.80	200.000	
	UNKNOWN	24.24	160.000	
	DIBENZPYRENE	26.15	270.000	

Semivolatile Analysis Data - ECMK3 Tentatively Identified Compounds

CASE NO: 26551

SDG NO: ECMKZ

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN (BC)	5.28	400.000	
	UNKNOWN CARBOXYLIC ACID (BC)	14.27	100.000	
10544-50-0	SULFUR, MOL. (\$8)	14.99	120.000	
	UNKNOWN ACID ESTER	16.90	93.000	
	UNKNOWN	20.54	89.000	
	UNKNOWN	20.77	160.000	
	UNKNOWN	22.71	100.000	
	UNKNOWN	23.45	160.000	
	UNKNOWN	23.69	9000.000	
	UNKNOWN	23.92	160.000	
	UNKNOWN	24.02	860.000	
	UNKNOWN	24.36	200.000	
	UNKNOWN	24.67	290.000	
	UNKNOWN	24.81	530.000	
	UNKNOWN	25.09	220.000	
	UNKNOWN	25.37	280.000	
	UNKNOWN	25.72	170.000	
	UNKNOWN	26.21	230.000	
	UNKNOWN	26.49	390.000	
	UNKNOWN	26.77	280.000	
	UNKNOWN	27.00	200.000	
	UNKNOWN	27.35	140.000	
iai e-	UNKNOWN	27.56	720.000	
	UNKNOWN	27.79	980.000	
	UNKNOWN	27.96	210.000	
	UNKNOWN	28.10	200.000	
	UNKNOWN	28.15	190.000	
FILE NAME:	ECMK2.SDG DATE: 10/30/98 TIME: 14:19 CADRE98		PAGE	: 5

Semivolatile Analysis Data - SBLKVP Tentatively Identified Compounds				
CASE NO: SDG NO:		LABORATORY: COMPUCHEM		
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	<u>-</u>
	UNKNOWN (BC)	5.36/	270.000	

#### Volatile Analysis Data - ECMK6 Tentatively Identified Compounds

CASE NO: 26551 SDG NO: ECMK2

CAS NUMBER			COMPOUND NAME		F	RT	ESTIMATED CONCENTRATION	٥
	TRIMETHYLB	ENZENE			22	2.36	12.000	J
FILE NAME:	ECMK2.SDG	DATE: 10/30/98	TIME: 14:19	CADRE98			PAG	E: 1

	Volatile Analysis Data Tentatively Identified		
CASE NO: SDG NO:		LABORATORY: COMPUCHEM	
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION Q
	TRIMETHYLBENZENE	22.38	18.000 J
FILE NAME:	: ECMK2.SDG DATE: 10/30/98 TIME: 14:19 CADRE98		PAGE:

	Semivolatile Analysis Data - SBLKTD Tentatively Identified Compounds			
CASE NO: 26551 LABORATORY: COMPUCHEM SDG NO: ECMK2			1	
CAS NUMBER	COMPOUND NAME	₹T	ESTIMATED CONCENTRATION	Q
		.28	400.000 99.000	
FILE NAME:	ECMK2.SDG DATE: 10/30/98 TIME: 14:19 CADRE98		PAGE:	3

110	Semivolatile Analysis Data - Tentatively Identified Compo	ounds		
CASE NO: SDG NO:	ECMK2	LABORATORY: COMPUCHEM		
CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN (BC)	5.28	260.000	
	UNKNOWN CARBOXYLIC ACID (BC)	14.27	140.000	
	UNKNOWN	19.28	120.000	
	UNKNOWN	20.52	77.000	
	UNKNOWN	23.43	120.000	
	UNKNOWN	23.66	4100.000	
	UNKNOWN	23.73	450.000	
	UNKNOWN	23.92	120.000	
	UNKNOWN	24.02	510.000	
	UNKNOWN	24.36	94.000	
	UNKNOWN	24.69	300.000	
	UNKNOWN	24.81	570.000	
	UNKNOWN	25.11	200.000	
	UNKNOWN	25.37	160.000	
	UNKNOWN	25.53	88.000	
	UNKNOWN	25.70	260.000	
	UNKNOWN	26.21	170,000	
	UNKNOWN	26.35	260.000	
	UNKNOWN	26.49	220,000	
	UNKNOWN	26.77	230.000	
058-61-3	STIGMAST-4-EN-3-ONE	27.00	' 380.000	
	UNKNOWN	27.35	280.000	
	UNKNOWN	27.44	73.000	
	UNKNOWN	27.56	1200.000	
	UNKNOWN	27.79	1100.000	
	UNKNOWN	27.96	150.000	
	UNKNOWN	28.10	290.000	

## CADRE Data Qualifier Sheet

<u>Qualifiers</u>	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The anlayte was positively identified; the associated numerical value is an approxim concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the present of an analyte for which there is presumptive evide to make a tentative identification.
NJ	The analysis indicates the present of an analyte for which there is presumptive le to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present)
Н	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

Case Number : 26551 SDG Number: ECMK2
te Name: Kinco Dump (IN) Laboratory: Compuchem

#### 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

#### 12. ADDITIONAL INFORMATION

Below is the summary of the pH for the samples of this data set:ECMJ4-ECMJ9, ECMK0-ECMK7

Sample ID	pH
ECMJ4	6.8
ECMJ5	6.3
ECMJ6	9.1
ECMJ7	7.0
ECMJ8	7.7
ECMJ9	7.9
ECMK0	7.9
ECMK1	7.5
ECMK2	6.4
ECMK3	6.2
ECMK4	6.5
ECMK5	7.8
ECMK6	6.2
ECMK7	7.7

No flag was entered for the SVOA TIC results for CADRE report, please refer to Form I SVOA for the final flag of the SVOA TIC results.

No reports were print out for the method blanks.

The results for fluoranthene, benzo(k)fluoranthene for ECMK0 were quantitated outside the calibration range. The results for phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene and benzo(g,h,i)perylene for sample ECMK1 were quantitated outside the calibration range. For any analyte that exceeded the calibration range in the original sample analysis; the results of the diluted analysis should be considered the sample's analyte concentration. Please, refer to Form Is for compounds which were quantitated outside the calibration range for the above SVOA samples.

Prepared By: Steffanie Tobin (Lockheed/ESAT)

Date: November 10, 1998

Case Number: 26551

Site Name: Kinco Dump (IN)

SDG Number: ECMK2 Laboratory: Compuchem

#### ECMJ9

Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

#### ECMK0

4-Methylphenol, Naphthalene, 2-Methylnaphthalene, Acenaphthylene Acenaphthene, Dibenzofuran, Fluorene, Carbazole, bis(2-Ethylhexyl)phthalate

#### ECMK0DL

Naphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene Dibenzofuran, Fluorene, Anthracene, Carbazole, Dibenz(a,h)anthracene

#### ECMK1

bis(2-Ethylhexyl)phthalate

#### ECMK1DL

Naphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene Dibenzofuran, Fluorene, Anthracene, Carbazole, Dibenz(a,h)anthracene

#### ECMK2

bis(2-Ethylhexyl)phthalate

#### ECMK4

Acenaphthene, Anthracene, Carbazole, bis(2-Ethylhexyl)phthalate Di-n-octylphthalate

#### ECMK5

Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

## ECMK6

1,4-Dichlorobenzene, Naphthalene, Diethylphthalate, Phenanthrene Anthracene, Butylbenzylphthalate, Benzo(a)anthracene, bis(2-Ethylhexyl)phthalate Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

#### ECMK7

1,4-Dichlorobenzene, Naphthalene, Diethylphthalate, Phenanthrene Anthracene, Benzo(a)anthracene, bis(2-Ethylhexyl)phthalate, Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

Prepared By: Steffanie Tobin (Lockheed/ESAT)

Date: November 10, 1998

Case Number: 26551

ite Name: Kinco Dump (IN)

SDG Number: ECMK2
Laboratory: Compuchem

## VBLKX4

Methylene Chloride, 2-Hexanone

## VHBLKY9

Methylene Chloride, Acetone

The following semivolatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

#### ECMJ4

Acenaphthylene, Phenanthrene, Anthracene, Di-n-butylphthalate, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

## ECMJ5

Acenaphthylene, Fluorene, Anthracene, Carbazole Di-n-butylphthalate, bis(2-Ethylhexyl)phthalate, Dibenz(a,h)anthracene

## ECMJ6

Phenanthrene, Pyrene, Benzo(a)anthracene, Chrysene bis(2-Ethylhexyl)phthalate, Di-n-octylphthalate, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

#### ECMJ7

Anthracene, Carbazole, Benzo(a)anthracene, Chrysene bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

## ECMJ7MS

Naphthalene, Pentachlorophenol, Phenanthrene, Benzo(a)anthracene Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

## ECMJ7MSD

Naphthalene, Pentachlorophenol, Phenanthrene, Fluoranthene Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene Benzo(g,h,i)perylene

## ECMJ8

Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

Case Number: 26551

Site Name: Kinco Dump (IN)

SDG Number: ECMK2 Laboratory: Compuchem



## 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The relative percent difference (RPD) between the following semivolatile matrix spike and matrix spike duplicate recoveries is outside criteria. Hits are qualified "J" and non-detects are qualified "UJ" for the unspiked sample.

ECMJ7MS, ECMJ7MSD

1,2,4-Trichlorobenzene, 4-Chloro-3-methylphenol, Acenaphthene, Pyrene

The following semivolatile matrix spike/matrix spike duplicate samples have percent recovery outside crite Hits are qualified "J" and non-detects are qualified "UJ" for the unspiked sample.

ECMJ7MSD

N-Nitroso-di-n-propylamine, 1,2,4-Trichlorobenzene, Pyrene

## 7. FIELD BLANK AND FIELD DUPLICATE

None of the samples in this data set are field blanks or field duplicates.

## 8. INTERNAL STANDARDS

No problems were found for this qualification.

## 9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms, it appears that all VOA and SVOA compounds were properly identified.

## 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following volatile samples have analyte concentrations below the quantitation limit (CRQL). All resubelow the CRQL are qualified "J".

ECMJ4, ECMJ5, ECMJ6, ECMJ7, ECMJ9, ECMK0, ECMK1, ECMK2, ECMK3
Acetone

ECMK6

1,1-Dichloroethane, Benzene, Xylene (total)

ECMK7

Carbon Disulfide, 1,1-Dichloroethane, Benzene, Xylene (total)

VBLKA5, VBLKX5

Methylene Chloride, Acetone, 2-Butanone, 2-Hexanone

Case Number: 26551

e Name: Kinco Dump (IN)

SDG Number: ECMK2 Laboratory: Compuchem

4-Nitroaniline

ECMK0, ECMK0DL, ECMK1DL, ECMK2, ECMK3, SBLKTD

4,6-Dinitro-2-methylphenol, Di-n-octylphthalate ECMJ4, ECMJ5, ECMJ6, ECMJ7, ECMJ7MS, ECMJ7MSD ECMJ8, ECMJ9, ECMK1, ECMK4, ECMK5, ECMK6, ECMK7, SBLKVP

Hexachlorobenzene, Carbazole, 3,3'-Dichlorobenzidine ECMK2, ECMK3, SBLKTD

bis(2-Ethylhexyl)phthalate

ECMJ4, ECMJ5, ECMJ6, ECMJ7, ECMJ7MS, ECMJ7MSD ECMJ8, ECMJ9, ECMK0, ECMK0DL, ECMK1, ECMK1DL ECMK2, ECMK3, ECMK4, ECMK5, ECMK6, ECMK7, SBLKTD, SBLKVP

## 4. METHOD BLANKS

The following volatile samples have analyte concentrations reported above the CRQL and less than or equal to ten times (10X) the associated method blank concentration. Hits are biased high and qualified "U" and non-detects are not flagged.



Methylene Chloride ECMJ4, ECMJ7, ECMJ9, ECMJ9MSD, ECMK0, ECMK1 ECMK3, ECMK4, ECMK5, ECMK6, ECMK7

Acetone ECMK7

The following volatile samples have analyte concentrations reported below the CRQL and less than or equal to times (10X) the associated method blank concentration. Reported sample concentrations have been elevated to the CRQL. Hits are qualified "U" and non-detects are not flagged.

Methylene Chloride ECMJ8, ECMJ9MS

Acetone ECMJ8, ECMK6

2-Butanone ECMK6, ECMK7

## 5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY



No problems were found for this qualification.

Case Number: 26551

Site Name: Kinco Dump (IN)

SDG Number: ECMK2 Laboratory: Compuchem



No problems were found for this qualification.

## 2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

No problems were found for this qualification.

## 3. CALIBRATION

The following volatile samples are associated with a continuing calibration whose corresponding initial calibration has percent relative standard deviation (%RSD) outside primary criteria. Hits are qualified "J" and non-detects are flagged "UJ".

Acetone

ECMJ4, ECMJ5, ECMJ6, ECMJ7, ECMJ8, ECMJ9 ECMJ9MS, ECMJ9MSD, ECMK0, ECMK1, ECMK2, ECMK3 ECMK4, ECMK5, ECMK6, ECMK7, VBLKA5, VBLKX4, VBLKX5, VHBLKY9

The following volatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Chloromethane, Vinyl Chloride, 2-Butanone, 4-Methyl-2-Pentanone, 2-Hexanone ECMJ4, ECMJ5, ECMJ6, ECMJ7, ECMJ9, ECMK0 ECMK1, ECMK2, ECMK3, VBLKX4

Acetone

ECMJ8, ECMJ9MSD, ECMK4, ECMK5, ECMK6 ECMK7, VBLKA5, VBLKX5, VHBLKY9

The following semivolatile samples are associated with a continuing calibration whose corresponding initial calibration has percent relative standard deviation (%RSD) outside primary criteria. Hits are qualified "J" and non-detects are flagged "UJ".

4-Nitroaniline, Carbazole ECMK2, ECMK3, SBLKTD

The following semivolatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Hexachlorobutadiene, 2,4-Dinitrophenol, Pentachlorophenol, Butylbenzylphthalate ECMJ4, ECMJ5, ECMJ6, ECMJ7, ECMJ7MS, ECMJ7MSD, ECMJ8, ECMJ9, ECMK0, ECMK0DL, ECMK1, ECMK1DL, ECMK4, ECMK5, ECMK6, ECMK7, SBLKVP

Case Number: 26551

SDG Number: ECMK2 te Name: Kinco Dump (IN) Laboratory: Compuchem

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Fourteen soil samples (ECMJ4-ECMJ9, ECMK0-ECMK7) were collected on 10/15/98. The lab received the samples on 10/16/98 in good condition. All samples were analyzed for the list of VOA and SVOA analytes. All samples were analyzed according to CLP SOW OLMO3.2 3/90.

Prepared By: Steffanie Tobin (Lockheed/ESAT)

Date: November 10, 1998

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION $\mathbf V$

DATE:		
SUBJECT:	Review of Data	
FROM:	Stephen L. Ostrodka, Chief (SRT-4J) Superfund Technical Support Section	~0 Andle
TO:	Data User: US Army Corp. of Engineering	
We have reviewed the data	for the following case:	
Site name: Hinco Dump (	IN)	
Case number: 26551	SDG Number: <u>ECMK2</u>	
Number and Type of Samp	les: 14 soil samples SYDC5 + VOC5	
Sample Numbers: <u>ECMJ4-</u>	ECMJ9, ECMK0-ECMK7	
Laboratory: Compuchem	Hrs. for Review: 11 livs	
Following are our findings:		
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CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

## ESD Central Regional Laboratory Data Tracking Form for Contract Samples

Data Set No:	CERCLIS No: /N/05 45
	55/ Site Name Location: Hinge Dung
Contractor or EP.	Lab: Datachem Data User: USACE
No. of Samples:	14 Date Sampled or Data Received: 11-16-98
Have traffic rep If no, are traff of-custody recon	stody records been received? Yes No No orts or packing lists been received? Yes No ic report or packing list numbers written on the chained? Yes No No ffic report or packing list numbers are missing?
Are basic data	Forms in? Yes No
No of samples cl	aimed: 14 No. of samples received: 19
Received by:	Lynette Burneto Date: 11-16-98
Received by LSSS	: Lynette Burner Date: 11-16-98
Review started:	11-17-98 Reviewer Signature: Tania Shaumo
Total time spent	on review: 4.5 hrs. Date review completed: 11-18-9
Copied by:	rette Burney Date: 11-25-98
Mailed to user b	y: Light Burnett Date: 125-98
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(2/98)

SEE REVERSE FOR PURPOSE CODE DEFINITIONS

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White - Lab Copy for Return to Region

Yellow - Lab Copy for Return to CLASS

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS SEE REVERSE FOR PURPOSE CODE DEFINITIONS Grand Francisco

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Green - Region Copy White - Lab Copy for Return to Region

Pink - CLASS Copy Yellow - Lab Copy for Return to CLASS EPA Form 9110-1

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS SEE REVERSE FOR PURPOSE CODE DEFINITIONS

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Blue - Region Copy White - Lab Copy for Return to Region Pink - CLASS Copy Yellow - Lab Copy for Return to CLASS EPA Form \$110-2 (2/98) SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS SEE REVERSE FOR PURPOSE CODE DEFINITIONS

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CLP Sample Numbers (from labels)	A Matrix (from Box 6)	B Conc. Low Med High		D Preservative (from Box 7)	Diss. Metals Total Metals		S Ana Low only SON/SON	l ligh only		Tracki	F nal Spe ng Num j Numb	iber .	Lo	G Station ecation entilier	Mo/ Year Sai	H /Day/ /Time mple ection	l Corresponding CLP Organic Sample No.	J Samplei Initials	K Field QC Qualifier 3 : blank S : Spike 0 : Duplicate B : Busate E : Perform Eval : the QC Sangre
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White - Lab Copy for Return to Region

F. CLASS Copy

Yellow - Lab Copy for Return to CLA

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SEE REVERSE FOR ADDITIONAL STANDARD INSTRUSEE REVERSE FOR PURPOSE CODE DEFINITIONS

United States	Environmental Protection cy ract Laboratory Program	& Cliao (For Org	c Traffic Remort of Custody janic CLP Analysis)		26No.	
Project Code     Account Code  Regional Information	2. Region No. Sampling Co. USACE Carrel District Sampler (Name)	4. Date Shipped Ca	Arrier FEDEX		Matrix (Enter in Column A)	7. Preservative (Enter in Column D)
negional information	Carayn Schurfe	1	2748481	,	1. Surface Water 2. Ground Water	1. HCl 2. HNO3
Non-Superfund Program	Sampler Signature	5. Ship To	vironmental		3. Leachate 4. Field QC 5. Soil/Sediment	3. NaHSO4 4. H2SO4 5. Ice only
Site Name HIMCU DUMP SLIKEFUL	CLEM Action	(028 Ro	ists, INC, N utė 10	7	6. Oil (High only) 7. Waste (High only) 8. Other (Specily	6. Other (Specify in Column D) N. Nol
City, State Site Spill ID	ST SI O&N FED ESI NPL	M Whippun D ATTN: Day	M. NJ 079.	81	in Column A)	preserved
CLP Matrix Conc.: Sample Presented Comp. (from Low Type: value Numbers Roy 6) Med Comp. (from Low Comp. (from Low Comp.)	trive High only or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac or Tac	F ional Specific king Number ag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	Corresponding CLP Inorganic Sample No.	J K Sampler Field QC Oualifier  8 = Birk S = Spie 0 = Oupleain R = Recale PE = Perform Eval Not a OC Sample
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ECML7 5 1. 60.5	<del></del>	5- <b>१५</b> 5359, 5-१५५३३	_	19/98 1244		
ECMLE 5 L MC 5	5 X X S 5328,6	5465326,544531	1 5BO4-6 10	19 96 130	MEGGE 5	(·K -
Shipment for Case Page S Complete? ( \( \sqrt{N} \) of	Sample(s) to be Used for Laboratory Q ちのから378、ちがいら368、ち ちゃから379、ちゃかりょり7	((पे ५३६३)	Sampler Signatures		Chain of Custody S	Seal Number(s)
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Blue - Region Copy White - Lab Copy for Return to Region Pink - CLASS Copy Yellow - Lab Copy for Return to CLASS EPA Form 9110-2 (2/98) SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS SEE REVERSE FOR PURPOSE CODE DEFINITIONS ( ) ( ) ( ) ( )

# PP		Inited States Con								<b>) Of</b> Orga	Traffic Report Custody Reanic CLP Analysis	ort cord	Case	No. 265	593		
1. Project Code	Accoun	l Code	_ I	egion Z	No.	Samp VIS T	olling Co. SACC-OMULUS SISTACCI	4. Date 5		ı	rier FEDEX		(E	atrix Enter Column	۵۱	(Ei	eservative nter in lumn D)
Regional Informatio	on .		1	pler <i>(l</i> レ <b>く</b> じ		e)	shubel	Airbill No	22	2	148271		1 2	. Surface . Ground	Water Water	1. 2.	HCI HNO3
Non-Superfund Pro	gram			pler S UU uppose		lure (	Straft !	5. Ship	to Just	E	nulvermen	tal	4 5	. Leachal . Field Q . Soil/Sec	C diment	4. 5.	NaHSO4 H2SO4 Ice only
Sile Name HIM SUPERFL City, State ELKHART, N	Site S	SITE	Lead	·		C P, R R	LEM Action  A FFS EM RD	(0)	Minam 28 1 Uhur 1: Da	Ε¥		21981	7	. Oil (Hig . Waste (High o . Other (i in Colu	nly) Specify		Other (Specify in Column D) Not preserved
A	B Conc.: Low 6) Med High	Comp./ (	rom ox 7) C	RAS A	8	rsis High only NRO/ TOX	Tracki or Tag	F nal Specil ng Numb j Number	lic er		G Station Location Identifier	H Mo/Da Year/Ti Samp Collect	me le	CLP In	l ponding organic ble No.	J Sampler Initials	K Field QC Qualifier B = Blank S = Spi D = Oxplicate B = Rinsate PE = Perform Eva == Nota CC Sam
ECMLI 5	L	C	5	X			5-44538		1.1		5618-0.5	·			<u>୪୧୦</u> ନ	(45)	
ECMLI 5			5 X 5 λ				5-445384 5-445394	5-1665	59538 389 ib	િક્સ જિલ્લા	SB18-0-5 SB18-2	10/19/98	MEDIS		Bada Pasi	CAS	
ECML 3 5	(,	7.7	$\frac{1}{5}$	Ŷ			ら・ΦΦ 539カ   5・ <b>Φ</b> Φ	5:145	3941,		5B18-6	10/19/198			RED	CAS	
ELMKB 5			5 X	$\langle X  $			5-445275	5-14-1	1276,		SB1-15-0.5	10/19/198				CAS	
ECMK9 5		-10	5 X				5-44-52-96 5-44-52-97	3237	5224		5615-2 5615-6	10/14/48			ank ant	CAS	
ECML\$ 5			5 X	X	_		5-445215,4	95371	, -44 5	ગુપૈલ		10/19/98			BQC2	·	_
	5 L	JC	5 X	X			5-045065,	44.254.	t,-44	Sici	5806-10	1101	14100	1	KIFY	CHS	
Shipment for Case Complete? (YN),	1 1	age of	Sample	(s) to	be L	Jsed I	or Laboratory QC	;	Additio	onal	Sampler Signatures		<del></del>	Chain of	Custody S	Seal Num	ber(s)
											Y RECORD				<b>+</b> • • • • • • • • • • • • • • • • • • •		
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DISTRIBU	llue - Rogic	on Copy Copy for R	eturn to	Reals		Pin Yelio	LASS Copy ow - Lab Copy for F	leturn to C	LAS.	<del></del>	EPA Form 911 (2/98)	SEE R	EVERSE	FOR ADD	TIONAL S	TANDARD	INST P

		Unite	ed States Cont	Environm ract Labo	nental F ratory I	rogra	lio am	:ncy			&	li Chai (For	nic Ti	ıste	ody .	ecord		Case N		593		
Project Code     Regional Informat		ount Co	ode	2. Reg V Sampl Ca		_l_ une)	_:D	:اکد	<u>کاک</u> م	.l:	AirUil N	Shippe	d Carrier	- il	E			in 1.5	nter Colum Suitace	Waler	(En in ( 1. H	Column D) Cl
Non-Superfund Pi	rogram			Sampl (QA) 3. Pur					<u>ل-ر</u>	Ľ.	5. Ship	To	muly					3. L 4. F	Bround .eachat Field Q0 Boil/Sec	e C	3. N 4. H	NO3 aOH 2SO4
Site Name HIY SUPERFU City, State EUKHNRT, I	LMD Sil		Ę	Lead X SF PF ST FE	, 3b :	E any	REI BI BI BI BI BI BI BI	EM	Aci		or K	re (: ello	roveri 150, 1 avol	D JW	rent S	5837		6. C 7. V C 8. C	Dil (Higl Vaste (i naly) Other (s n Colur	h only) High specily	6. la 7. O in	2CR <sub>2</sub> O <sub>7</sub> e only ther (specify i Column D) lot preserved
CLP Sample Numbers (from labels)	A Matrix (from Box 6)	B Conc. Low Med High	C Sample Type: Comp./ Grab	valive	Diss. Metais Total Metals		Lov		ligh inly		Track	F onal Sp ing Nu ig Num	mber		St Loc	G ation cation ntifier	Moz Year Sa	H /Day/ :/Time mple ection	CLP	l esponding Organic nple No.	J Sampler Initials	K Field QC Qualifier D : Blank S : Spike D : Duplicate R : Bucate Pr : Pedium Eval - flot a QC Sample
mesaci	5		C	b	X	X							53/8		5312	) - L	10/2/9	8 115	ECM	באו	<i>C</i> 5	- Harat 10 Sample
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MEBQ67	5	<u>L</u>	<u>C</u>	1	<u>^</u>	-   X -	-		-	2-49	5215	13-	195319		>012	-0.5	10/2.1/	1045	ECI	169	CS.	
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Shipment for Case Complete? (YN)	)	Page	S  -   S	ample(s - φε5.31 - ψε5.31	) to be	Use	ed fo	r Lab	oral	ory QC		Addit	ional Samp	oler	Signatu	res	<u> </u>	C	hain of	Custody S	Eal Num	ber(s)
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Relinquished by:	(Signati	ure)		Date / T	ime			ived alure		aborat	or <b>y by</b> :		Date	/ Tir	ne	Remark	s Is cu	stody sea	al intac	  ? Y/N/nor	ne	

Green - Region Copy White - Lab Copy for Return to Region Pink - CLASS Copy Yellow - Lab Copy for Return to CLASS EPA Form 9110-1

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<b>%2</b> F		Inited States E Contr	Environn act Labo	nental Pro ratory Pro	lection ogram	Agency		(Fo	<b>n of</b> r Orga	Traffic Repo Custody Re	cord	Case	No.	265	593	
1. Project Code	Accoun	Code	2. Re	gion No L.	ルファル	ling Cp. Le Courtu	10	le Shippe 20 ૧૬	1	FEDX rier		(E	atrix Enter n Columi	1 A)	(Er	servative iter in lumn D)
Regional Informa	tion		Samp	ler (Nar	ne)	Schwafe		Number 294	34	47482		1.	. Surlace . Ground	Water Water	1. 1	HCI HNO3
Non-Superfund P		DLIMP		ler Sign pose	Early A	Straft: Lion Long-Te LEM Action	1	ip To holis to E R.	; z.(	Enchannest	rd' Analysb	4 5 6	. Leacha . Field Q . Soil/Se . Oil (High	C diment	4, I 5, I 6, (	NaHSO4 H2SO4 ce only Other
SUPERFU City, State FLKHART,	Site St	2 ULE	<del></del>	T ED	P R	A FS EM RI I PA	i luh	bland	, /	10 JJ 0797/ Glen			. Waste (High c . Other ( in Colu	Specify .		(Specify in Column D) Nol preserved
CLP Ma Sample (fr	x 6) Med High	C Sample Pres Type: val Comp./ (fro Grab So)	ser F ive — om (7)	BNA BNA Pest/ PCB	lysis High only ARO/ TOX		F egional Spe acking Nui Tag Numl	mber		G Station Location Identilier	H Mo/Da Year/Tir Sampl Collecti	ne e	CLP Ir	I ponding norganic ole No.	J Sampler Initials	K Field QC Qualifier  B = Blank S = Spike D = Dupkcale R = Rinsale PE = Perform Eval — = Not a QC Sample
	5 L	5 6		_ _			51,5	4454	1 /	5614-2	1 ' 1 1 1	<u> 130</u>	MEBO		CS	
L 3.11.	5 4	5 C		X	<u></u>	5-445	241L	11/00	·^·	SB14-2	10/20/98			962 967	CS (	
FCMPO S	5 4	5 6		又		5-44.5	99 J. S. 302	:4 <i>9:22:</i>	7-	3512-45 3312-45	10/20/98 1			467		
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Ecmcy 5	2	5 (	-	X		5 445	3 y 4 1	J- <b>1</b> J		5B12-05	10/2./971	LYS		346-7	ζŞ	5
Shipment for Cas Complete? ( Y/N)		age §	ample(	s) to be 5345 5278	Used 5.	for Laboratory	ac 5 /65	X4 Addit	ional	Sampler Signature	S		Chain of	Custody S	Seal Numl	per(s)
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8	P	4		Contract	Labora	lory P	ogram				(Fo	11 <b>0</b> 1 r Org	Traffic Roy Custody anic CLP Analys	ecord	Case	8 No. Z (	259	3	
Project Code	•	Accour	nt Code		P. Reg	ion No	Sam L	pling Co SACE IST V	-Qrualu	4. Date	Shipped 2/98		rier FEDX		(	Matrix Enter		(E	eservative oter in
Regional Inform	nalion		<del></del>	5	Car				afel	Airbill N					1	n Columr . Surface . Ground	Water	1.	ilumn D) HCI HNO3
Non-Superfund	Progra	3 <b>m</b>		)—	ample . Pum		Parly A	Rus		5. Ship		: 1 T	nvitin merifo	l A. 143	3	. Leacha . Field Q . Soil/Se	te C diment	3. 4.	NaHSO4 H2SO4 Ice only
Site Name H SUPERF City, State ELKHAK	-ur	$\mathcal{D}$ Site S		P	Purp SF PR ST FE	Р		LEM A IEM II	Long-Term Action FS RD RA O&M	6.25 Whip	Rus	te 1	NJ 079		7	. Oil (Hig . Waste (High o . Other ( in Colu	nly) Specify	6.	Other (Specify in Column D) Not preserved
Sample Numbers (Irom	A Matrix (Irom Box 6) Other:	B Conc.: Low Med High	C Sample Type: Comp. Grab	vative	?}	BNA Pest/ PCB	High only ARO/ TOX		Track	F nal Speci ing Numb g Numbel	fic er	,	G Station Location Identifier	Ye	H lo/Day/ ear/Time sample ollection	CLP In	l ponding organic ole No.	J Sampler Initials	K Field QC Qualifier B=Blank S=Spke 0=Dupkcale R=Rinsale PE=Perform Eval —=Not a OC Sangle
ECMP2	5	L_	Er	5	X	_ _		5-14	45311	9-44	15314	/	58-12-1;	10/20/1	x 115	MEB	((40)	C5	
ECM 124	5	<u>L_,</u>	<u>C</u>	5		<u>X</u>  _	ļ	5-4	4531	2 /	77-		5612-6	10/2 y	17x 1115	MER		<u>C5</u>	
ECMULI	5	<u></u>	<i>(</i> -	5	K	_	}	5-4	133	5,5 - 4	الحركا	17	\$3/2-7_ 5227		97 // a	MEBO	_	CS	-
ECMP1	5	- <u>L-</u>	<u>c</u>	5	$\frac{1}{\lambda}$			5-	14551	65 5, 5-1	dil co	11.6	5317-2 5808-2		198 1143 18 0745	MER		25	
Eimma	7		<u>C</u>	3		$\overline{\chi}$		57	d. 52		<u> </u>	40	5B08-2	10/2	10 014S	MERG	)F6	Z-S	
ECMMI	5	1.	G	5	X	1	<del> </del>	5-10	1527	3,5-1	1.54	127	5308-0,5		KIE U730	MEBO		ĊS	
Ecmme	5	L	C	5		X		5-4	1.52	10	<i></i>	/	5B18-015	, 10/2		MEB		CS	
ECMN6	5	L	G	5	X			5-4	4541	6,5	1454	14	5014-6		148 0949			CS.	
ECMNL	5	4	C	5		χĹ	<u> </u>	5-4	454	15	· 		5B14-6		148 0945			<u>(5</u>	
Shipment for C. Complete? (Y/			age of <u>2</u>	San	nple(s)	to be	Used	for Labo	oratory QC	, 	Additi	onal	Sampler Signatu	es		Chain of	Custody S	Seal Num	per(s)
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Blue - Region Copy White - Lab Copy for Return to Region

Pink - CLASS Copy Yellow - Lab Copy for Return to CLASS EPA Form 9110-2 (2/98) SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS \*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

#PP	Δ	Jnited Sta C	les Envi	ronme	intal Pratory P	rotection	Agency			(Fo	n of Orga	Traffic R Custody nic CLP Ana	Rec		Case		7691	3	
1. Project Code	Accoun	l Code	2.	Reg	ion N	o Sam USA	pling G (t. () 175tr	neithe		Shipped		rier Tecl Ex			(E	atrix Enter Column	<i>A</i> )	(Er	servalive nter in lumn D)
Regional Information				Λ·	or (Na	me) vi .50	· hw	.fe1		lumber	Q	1434	19	493	1.	Surface Ground	Water Water	1.1	, -INO3
Non-Superlund Prog	ram				er Sig Col ose	nature V Early A	clion	Long-Term	5. Ship	ustria	IE	nuizonne-1	4/+	luclysts	4 5	. Leachai . Fìeld Q . Soil/Se . Oil (Hig	C diment	4. 1 5. l	NaHSO4 H2SO4 ce only Other
Site Name Hinco Dung S City, State  Tklingt, IN	Site S	(1 S. 10 pill ID	<u> </u>	SF PR ST FE	<b>P</b>	F	CLEM PA REM RI SI SI	Action F)FS	628 Whi ATT	Rail ppun N: D	١, ١	0 VJ 679 Glen	(F)		7	. Waste (High o . Other (: in Colu	nly) Specify		(Specify ir Column D) NoI preserved
A	Low	. 1	D Preservative (Irom Box 7)	$\vdash$		alysis High only ARO		Regior Tracki	F nal Spe ng Num j Numb	cific ber	-	G Station Location Identifier		H Mo/D Year/T Samp Collec	ime ole	CLP In	l ponding organic de No.	J Sampler Initials	K Field QC Qualifier B=Blank S=Sp D=Duplicate B=Rinsate PE=Perform Ev == Not a QC San
ELMNI 5	L,	6-	5	X			5-1	45311	15-	1/533	5	18 10 - 10			6700	MEG		C'S	P
ECMN3 5	1	6	<u>-5</u>	X	$X_{-}$		5-11	4453	27	115	4,000	3810-10 3810-6		10/23/980 10/20/98		MES	<del></del>	C5	<u> </u>
ELMN3 S	<u>                                   </u>	<u>C</u>	5		X	_	51	65217	1{ 1.6:	-Ψ <u>-</u>	//	5610-E		[6] 2 J 47				C-S	
ECMN4 G	5 L C 5 X 5 L C 5 X			5.	16531	9,5	-145	350	5B14-c	15	10/2./10	00	MEB		CS				
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		<u> </u>							CHAIN	OF CU	STOD	Y RECORD	-			l			
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Yellow - Lab Copy for Return to CLASS

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United States Environmental Prot Contract Laboratory Pro	(For	ic Traffic Report of Custody acord r Organic GLP Analysis)	Case No.	593	
1. Project Code Account Code 2. Region No.	Sampling Co. 4. Date Shipper	Carrier X	6. Matrix (Enter	7. Preserv (Enter	in
Regional Information Sampler (Nam	e) Airbill Number	2943449493	in Column A  1. Surface V 2. Ground W	Vater 1. HCI	
Non-Superfund Program Sampler Signa (LUL) 3. Purpose*		al Environmental Andly	3. Leachate 4. Field QC 5. Soil/Sedi	3. NaH: 4. H2S0 ment 5. Ice o	SO4 O4
Site Name  Hima: Dunic Sparted Sity SF  PRP  City, State  Line Time Site Spill ID  ST  FED	CLEM Action (28 Rough REM XRD LULippanie		6. Oil (High 7. Waste (High onl 8. Other (Sp in Colum	only) 6. Othe (Spe y) Colu pecify N. Not	
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ECMP6	5	Law	C	5_		X.			5-005			·			09-0.	5-	10/21/18	0543	NEBO	2H3	CAS	
ECMP8	5	L	G	_5	X	-		3	-0210	13/	5-1	1210)	12~	. کرک	<u> </u>		10/21/75	0900	MEBG	0H5	CAS	-
ECMPS	_5_	<u>L</u>	C	5	ļ	X			-02/0.					5BC	γ" Z.		11/21/95	0700	HEB	QNS-	CAS	_
ECM P']	5	<u>L</u> .	G	_5	X		_ _	_ 3	5-021Q	05/	5-0	2.120	7_	5B0	7-10		14/98				CAS	_ D
ECHP7	.5	<u></u>	<u> </u>	_5_		X			-0210					3B0	9-10	/	10/21/78	0545	HEB	Q144	CALL	レ
ECMPU	_5_	<u>L</u>	G	5	$X_{-}$		_	5	-0058.	51/	5-00	2523	<u>(,</u>	5011	<u>- λ</u>		10/21/98	0515	MEBO	CHI	(1/1/2	
ECMPY	5	<u> </u>	C	5		$X_{-}$			7-0053					SBU	2	- 1	0/21/98				CAS	
ECM PS	_5_		6	5	X		_ _	_ 5_	-0052	<u>53/</u>	5-0	052	54	<u> 381</u>	1-6		10/21/93				GVZ	
ECMP5	5	L	C	5		X			-005			- <del></del> -		581			10/21/95	<u>ल्डउ</u> ल			CMS	
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Blue - Region Copy White - Lab Copy for Return to Region

Pink - CLASS Copy Yellow - Lab Copy for Return to CLASS EPA Form 9110-2 (2/98) SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
\*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

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<b>SEF</b>		United States Cont	Environmei ract Labora	ntal Pro tory Pro	tection ogram	Agen	су		&	Chain (For	anic Traft n of Cust Inorganic CL	ic Rep ody Re P Analysi	oort ecord s)		Case No		.59	3	
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DISTRIB	Green - I White - I	Region Copy ab Copy fo	/ r Return to	Regio	n '			SS Con b Copy	y for Return	10 CD70		orm 9, . u-1	•	SEE REV	ERSE FO	OR ADDITIO OR PURPOS	NAL ST E CODE	ANDARD E DEFINIT	INS TION

#EP			Environmer act Laborat				ncy				(For	Inorganic	sto	ic port ody necord Analysis)	i	Case N	o. 26593	· · · · · · · · · · · · · · · · · · ·	
1. Project Code エキレ 世 ルリングインフィスス・01・ Regional Informatio		ode	2. Region 5 Sampler		LD ne)	is tv	Din ict	ii ha		10/3	u'/4'g Number	Carrier +		EX UI		1. S	nter Column A) urlace Water	(En in ( 1. H	
Site Name Himes Danp City, State Elkhort, TA	Superfund	S.7e	Sampler VV2 3. Purpo  Lead SF PRP ST FED			CLEM PA REM RI SI ESI	1	Actio	)-Terin	On Ke	p To And e Gou llogg,	elytical	1 E	Inc. Gulch 3837		3. L 4. F 5. S 6. C 7. W 0 8. C	around Water eachate ield QC ooil/Sediment Oil (High only) Vaste (High nly) Other (specily or Column A)	3. N 4. H 5. K 6. la 7. C	NO3 laOH 2SO4 2GR2O7 lic only lither (specify 1 Column D) lot preserved
Numbers (from	Other: High	Type: Comp./ Grab	vative (from Box 7) ≥	1-1	Cyanide	Anal Low only spironly	Ťiii	igh isly		Trai	F ional Specking Nui fag Nuinl	mber ·		G Station Location Identifier	Mo Yea Sa	H /Day/ r/Time mple ection	l Correspondir CLP Organic Sample No.	g Sample: Initials	K Field QC Qualifier  B. Blank S.: Sp.ke D.: Duplicate R. Blanke Pf. Pediam Evat - Itota QC Sample
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Shipment for Case	Page	Sa	ample(s) t	o be	Used	I for L	abo	orato	ory QC		Addili	ional Samı	oler S	Signatures		CI	nain of Custod	r Seal Num	ber(s)
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Green - Region Copy White - Lab Copy for Return to Region Pink - CLASS Copy Yellow - Lab Copy for Return to CLASS EPA Form 9110-1 (2/98) SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS SEE REVERSE FOR PURPOSE CODE DEFINITIONS

	United States Cont	Environmental Pro act Laboratory Pr	olection Agency Ogram	Ind & Chain	nic Traffic F of Custody	lepoit Record	Case No.		
		·		(For In	organic CLP Ana	llysis)		2659	13
1. Proinst Code FAG 14 346147722-01-7 Regional Information	Account Code	Sampler (Nan	Sampling Co. XACE Omalia District 10) Anderson	1. Date Shipped    10 21 / 18     Airbill Number	ted E		1		7. Preservativ (Enter in Column
Site Name Hi MLO Duny City State Lucy T	sile Spill ID	Sampler Sign  Ward  3. Purpose  XISF  PRP  ST  LEFED		5. Ship To SVL Analy One Gover Kellugg	ytical, In	2 37 24	2. Gra 3. Lea 4. Fie 5. So 6. Oil 7. Wa onl 8. Otl	ound Water achate eld QC al/Sediment (High only) aste (High	1. HCl 2. HNO3 3. NaOH 4. H2SO <sub>4</sub> 5. K2CH2O <sub>7</sub> 6. Ice only 7. Other (spender) in Column N. Not prese
Sample Mal Numbers (fro (from Box labels) Other	rix Conc. Sample m Low Type: 6) Med Comp./ — High Grab	Preservative	ON Paring a principle only only only only only only only only	Regional Speci Tracking Numb or Tag Number	er ' 1.e	Station Mo ocation Yea entifier Sa	H /Day/ f/Time mple ection	I Corresponding CLP Organic Sample No.	Initials Quali  D = Blank :  D : Doyal  R = Roo  PE : Perton
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Complete? (Y(N))			·				Condi	in of Custody Se	eal Number(s)
			(	CHAIN OF CUSTO	DY RECORD		l		
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SEE REVERSE FOR PURPOSE CODE DEFINITIONS

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SEE REVERSE FOR PURPOSE CODE DEFINITIONS 380240

AC	P	A	United St	tales Em Contract	Arony Labo	dent of sno	al Pro	otection	Agency				<del> </del>	r Org	c Traffic Rep I Custody Re panic CLP Analysi	cord		Case	265°	3	SIG N ECM			
1. Matrix (Enter in Colum		(E	eserva inter in olumn l	ni _		5		US AC	pling Co E Dn 15tv. L	icha †			0/48		hed Ex			10t	धारम		di		_	
1. Surface A 2. Ground V	Valer Valer	1. HO 2. HI		. 1	11	lar		And	lers.	<u>~</u>		Airbil N	76	.42	849222			48	05-01	mtract Naum	He rac	Prx	19	÷
3. Leachate  4. Field OC  5. Soil/Sedi  6. Oil (High  7. Waste	meni only)	4. H2 5. Jc 6. OI (S	SO4 e only her pecify	ın 3	1/1/	111	زند	Early Ac	LEM	Long-Te- Action	<b>1</b> 000	628	stric Rout	te	nummental A	ių lysb <sub>,</sub>	+rc.	;	ived by		Da	to Re	ceive	₫
(High onl B Other (Sp in Column	ecity	N. N	olumn l ol eserve		XS Ts	ЯP	<u> </u>	HR R S	EM I	X RI	DI	19. HUL ITTA			51m			Cont	ract Numb	Der	Pr	ice		
CLP Sample Numbers (from: labels)	A Matrix (from Box 1)	B Conc.: Low Med High	C Sample Type: Comp Grab	Preservative (from Box 2		Т	PCB PCB	High only ARO/ TOX		Tre	ackin	F al Speci g Numb Numbe	760		Station Location Identifier	Ye.	H o/Day/ ar/Time ample ollection	3	CLP In	I ponding torganic tole No.	Sample Initials	High services	White Cq. by a discount	Aleter-
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	Environmental Protection y y ract Laboratory Program	& Châm of Cust (For Inorganic CL	fic Report ody Leord P Analysis)	Case No.	693	
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Appendix I-3

1998 Soil Gas Analytical Results

SPA United	States Environmental Protection Agency Contract Laboratory Program	anic Traffic Rep & Chain of Custody Re (For Organic CLP Analysi	ort Case No. ecord 2650	13
1. Project Code 1.46 #7 2.46 47723-01-3 Regional Information	2. Region No. Sampling Co. SHIE Own his District Sampler (Name)	10/22/18 Carrier Feel EX Airbill Number	6. Matrix (Enter in Column A)	7. Preservative (Enter in Column D)
Non-Superlund Program  Site Name  Hime: Dump Superfund Site Spill ID	Sampler Signature  3. Purpose' Early Action  Lead PA IFS  PRP RIM  ST SI O&M  FED ESI NPL	Whipping, No 079.	7. Waste (High only)	1. HCI 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. Other (Specify in Column D) N. Not preserved
ABC	D E  Sele Preser RAS Analysis Reginer valive Tract  Of (from The Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the C	F G ional Specific Station king Number Location ag Numbers Identifier	H Corresponding Year/Time CLP Inorganic Sample Sample No. Collection	J K Sampler Field QC Initials Qualifier B = Blank S = Spike D = Dupicate R = Prizale PE = Perform Eval D = 2 Not a QC Sample
FCM 45 2 L G FCM 45 2 L G Em 47 2 L G	$  \chi     5 - \psi \lambda     \psi  $	5-11162 WT11919 5-121197 LUT119A 5-121197 WT11919	10/24/98 6857 MEBQJ3 10/22/98 6857 MEBQJ3 10/22/98 8857 MEBQJ4	MA 5 MA D
ECM R1 2 L G ECM RU 2 L G ECM RU 2 L G	1 X 5-42144 1 X 5-421183 5 X 5-421189	15-121163 WT119A	10/22/48 1028 MEBRITS	MA B MA D
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Relinquished by: (Signature)	Date / Time Received for Labora (Signature)	atory by: Date / Time	Hemarks 1s custody seal intact? Y/N/n	one

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Case Number: 9811284 Site Name: Himco Dump SDG Number:

Laboratory: AIR TOXICS LTD

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

10 VOST cartridges (7205 A&B, 7113 A&B, 7116 A&B, 7106 A&B, 7122 A&B, 7104 A&B, 7123 A&B, 7203 A&B, 7215 A&B, 7201A&B) were collected on 11/16/98. The lab received the samples on 11/17/98 in good condition. All samples were analyzed for the list of volatile analytes. All samples were analyzed following SW846 Methods 5041A/8260B (dissolved gases).

All sample analysis were performed within the technical holding time of fourteen (14) day after sample collection; therefore, the results are acceptable.

Prepared By: Steffanie Tobin (Lockheed/ESAT)

Date: April 20, 1999

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

	DATE:
	SUBJECT: Review of Data  Received for Review on April 20, 1999
	FROM: Stephen L. Ostrodka, Chief (SRT-4J)  Superfund Technical Support Section  TO: Data Hayer U.S. Army Corp. Of Francisco
	TO: Data User: <u>U.S. Army Corps Of Engineers</u>
	We have reviewed the data for the following case:
	Site name: Himco Dump
	Case number: 9811284 SDG Number:
	Number and Type of Samples: 10 VOST cartridges
C.	Sample Numbers: (7205, 7113, 7116, 7106, 7122, 7104, 7123, 7203, 7215, 7201) A&B
	Laboratory: AIR TOXICS LTD. Hrs. for Review: 14 hv3
	Following are our findings:
Atu	, dota is useable and acceptately with the
qualif	reation described in the attached inversative.
<i>U</i> • • • • • • • • • • • • • • • • • • •	deta is insented and acceptable with the reation described in the attached inversative.  Midenal L Byrils

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J Case Number: 9811284 Site Name: Himco Dump SDG Number:

Laboratory: AIR TOXICS LTD

## 8.INTERNAL STANDARDS

The internal standard area counts and retention times were within the QC limits. Therefore, the results are acceptable.

## 9.COMPOUND IDENTIFICATION

The target compounds and TICs for the samples were properly identified.

## 10.COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The Volatile Target Compounds (TCLs) and Tentative Identified Compounds (TICs) were properly quantitated; therefore, the data are acceptable.

### 11.SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

## 12.ADDITIONAL INFORMATION

Tetrachloroethene for sample 7203 A&B; tetrachloroethene, vinyl chloride and trichloroethene for sample 7113 A&B were quantitated out side the calibration range but no additional dilution was analyzed. The results for tetrachloroethene for sample 7203 A&B; tetrachloroethene, vinyl chloride and trichloroethene for sample 7113 A&B are estimated (J).

Prepared By: Steffanie Tobin (Lockheed/ESAT)

Data: April 20 1000

Case Number: 9811284

Sir ame: Himco Dump

SDG Number:

Laboratory: AIR TOXICS LTD

## 1.HOLDING TIME

Ten VOST cartridges samples (7205 A&B, 7113 A&B, 7116 A&B, 7106 A&B, 7122 A&B, 7104 A&B, 7123 A&B, 7203 A&B, 7215 A&B, 7201A&B) were collected on 11/16/98. The lab received the samples on 11/17/98 in good condition on 11/17/98. The samples were analyzed for Volatile analytes (dissolved gases) following SW846 Methods 5041 A/8260 B.

All sample analyses were performed within the technical holding time of fourteen (14) day after sample collection; therefore, the results are acceptable.

## 2.GC/MS TUNING PERFORMANCE AND GC PERFORMANCE

All GC/MS tuning complied with the mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

## 3.CALIBRATION

Initial and continuing calibration standards of VOA were evaluated for the Target Compounds List (TCLs) and outliers were recorded on the outlier forms included as a part of this marrarive.

## 4.METHOD BLANK

9811284-11A, 9811284-11B and 9811284-11C are the method blanks. 9811284-11B contains bromomethane at 11 ng. Bromomethane is not a common laboratory contamination. The present of bromomethane in the associated samples is flagged as non-detected (U) when the sample results are less than 5X the blank result. Please refer to the outlier forms for the list of associated samples.

## 5.SURROGATE RECOVERIES

All samples were analyzed at the dilution and benzene-d<sub>6</sub> was reported as one of the five surrogates. No recovery for Benzene-d<sub>6</sub> was reported for the blanks. No indication in the method or laboratory narrative why benzene-d<sub>6</sub> was reported as surrogate for the diluted samples but not the blanks.

The recovery of 4-bromofluorobenzene of sample 7123 A&B and 1,2-dichloroethane of method blank 9811284-11B were above was above QC limit (78-119%). The positive results for sample in sample 7123 A&B and the blank 9811284-11B should be considered estimated "J", and no qualification for the non-detected.

## 6.LABORATORY CONTROL SAMPLES

The recoveries of acetone, carbon disulfide, 2-butanone and 2-hexanone for the laboratory control sample (LCS) were above the QC limits. No qualification is recommended for the sample results base on the LCS results.

## 7.FIELD BLANK AND FIELD DUPLICATE

There were no sample specified as a field blank or field duplicate in this data

Prepared By: Steffanie Tobin (Lockheed/ESAT)

Date: April 20, 1999

## CALIBRATION OUTLIERS VOLATILE TCL COMPOUNDS

(Page 1 of 1)

CASE\SAS#: PP COLUMN: EATED PURGE (Y/N):

SITE NAME: Himas Dump

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Reviewer's Init/Date: 4/19/99

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

• = These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

ESAT-5-055.4 1/95

## CALIBRATION OUTLIERS VOLATILE TCL COMPOUNDS (Page 1 of 1)

Pg 5 of 6

CASE\SAS#:_	1577
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ATED PUI	RGE (Y/N):

LABORATORY:_	411 - OKICS	(T)
SITE NAME:	imco Di	in)

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Reviewer's Init/Date: 4/19/99

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

• = These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

ESAT-5-055.4 1/95



## Regional Transmittal Form

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

	DATE:	
	SUBJECT:	Review of Data Received for Review on 15 APML 1999
	FROM:	Stephen L. Ostrodka, Chief (HSRL-5J) Aur Iture outmiller Superfund Technical Support Section Michael & Byrith 5/6/99
	TO:	Data User: U.S. Admy CORPS/Engs. 5/6/99
	We have r	eviewed the data for the following case:
	SITE NAME	: HIMCO DUMP
	CASE NUMB	ER: DACWA5-99-P-0094SDG NUMBER: 770/A&B
		d Type of Samples: 9 Tenal TUBE DIS. GAS
•	Sample Nu. 7719 A-B, Laborator	mbers: 7701A-8, 7702A-8, 7704A-8, 7716A-8, 7711A-B, 7712A-B, 7721A-B, 7724A-B  Y: AIRTCXICS HTD Hrs. for Review:
	Following	are our findings:
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sı l	ipurati	vus describer in the attribut warming
	,	Modernes & Befinde
		u

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

## ORGANIC DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature used in this document, the following code letters and associated definitions are provided:

**VALUE** - when/if the result of a value is greater than or equal to the Contract Required Quantitation Limit (CRQL).

- U Indicates that the compound was analyzed for, but not detected. The sample quantitation limit corrected for dilution and percent moisture is reported.
- Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound where the result is less than the sample quantitation limit, but greater than zero. The flag is also used to indicate a reported result having an associated QC problem.
- R Indicates the data are unusable. (NOTE: The analyte may or may not be present.)
- N Indicates presumptive evidence of a compound. This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search.
- P Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns. The lower of the two results is reported.
- C Indicates pesticide results that have been confirmed by GC/MS.
- B Indicates the analyte is detected in the associated blank as well as in the sample.
- E Indicates compounds whose concentrations exceed the calibration range of the instrument.
- D Indicates an identified compound in an analysis has been diluted. This flag alerts the data user to any differences between the concentrations reported in the two analysis.
- A Indicates tentatively identified compounds that are suspected to be aldol condensation products.
- G Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method.
- L Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method.
- T Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample.
- X,Y,Z are reserved for laboratory defined flags.

Page 2 of 5

Laboratory: @AIR TOXICS LTD. Case: DACW45-99-P-0094

Site: HIMCO DUMP SDG: 7701 A&B

### 1. HOLDING TIME

Nine (9) VOST cartridge samples, numbered 7701 A&B, 7702 A&B, 7704 A&B, 7710 A&B, 7711 A&B, 7712 A&B, 7719 A&B, 7721 A&B, and 7724 A&B, were collected on December 10, 1998. The lab received the samples on December 11, 1998 in good condition. All samples were analyzed for the full list of volatile organic analytes. All were analyzed according to SWA48 method 5041A/8260B.

The VOA analyses were performed within the technical holding times of 14 days after sample collection; therefore, the results are acceptable.

## 2. GC/MS TUNING AND INSTRUMENT PERFORMANCE

All GC/MS tuning complied with mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

### 3. CALIBRATION

Initial and continuing calibrations of the Volatile standards were evaluated for the target compound list and outliers are recorded on the forms included as part of this narrative.

## 4. BLANKS

Lab Blank is the method and instrument blank associated with this data case in accordance with the analysis method. Lab Blank contained Bromoform at 20 ng and no TICs. The presence of Bromoform in the samples associated with Lab Blank is flagged as non-detected (U) when the concentration is less than (<) five (5) times the blank result.

## 5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The volatile system monitoring compounds were within QC required limits for recovery and retention time; with the exception of:

The recovery of 4-Bromofluorobenzene was out of range high

Reviewed by: Thomas Sedlacek Lockheed Martin/ESAT Date: April 20, 1999

ID:3128864071

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## NARRATIVE

Page 1 of 5

Laboratory: @AIR TOXICS LTD.

Case: DACW45-99-P-0094

Site: HIMCO DUMP

SDG: 7701 A&B

Below is a summary of the out-of-control audits and possible effects on the data for this Case/SDG:

Nine (9) VOST cartridge samples, numbered 7701 A&B, 7702 A&B, 7704 A&B, 7710 A&B, 7711 A&B, 7712 A&B, 7719 A&B, 7721 A&B, and 7724 A&B, were collected on December 10, 1998. The lab received the samples on December 11, 1998 in good condition. All samples were analyzed for the full list of volatile organic analytes. All were analyzed according to SWA48 method 5041A/8260B.

The VOA analyses were performed within the technical holding times of 14 days after sample collection; therefore, the results are acceptable.

Reviewed by: Thomas Sedlacek Lockheed Martin/FSAT Date: April 20, 1999

Page 4 of 5

Laboratory: @AIR TOXICS LTD. Case: DACW45-99-P-0094

Site: HIMCO DUMP SDG: 7701 A&B

In sample 7721 A&B, the value for tetrachloroethene exceeded the calibration range, and there is a possible cartridge overload of the VOST cartridge.

In sample 7724 A&B, the value for tetrachloroethene exceeded the calibration range, and there is a possible cartridge overload of the VOST cartridge.

In sample 7719 A&B, the value for tetrachloroethene and trichloroethene exceeded the calibration range, and there is a probable cartridge overload of the VOST cartridge. The lab reported that the peak for tetrachloroethene saturated the mass spectrometer, the value is therefore basis low.

In sample 7702 A&B, the value for 1,1,1-trichloroethane exceeded the calibration range.

The collection and analysis method does not provide for reanalysis of submitted samples. The use of combined data, from samples 7721 A&B, 7724 A&B, 7719 A&B and 7702 A&B for POHC or DRE calculations, would be questionable.

In sample 7704 A&B the value for bromoform should be 14 U.

Reviewed by: Thomas Sedlacek Lockheed Martin/ESAT Date: April 20, 1999

Page 3 of 5

Laboratory: @AIR TOXICS LTD. Case: DACW45-99-P-0094

Site: HIMCO DUMP SDG: 7701 A&B

in sample 7721 A&B, and the LCS. Therefore, positive results for the above noted samples are estimated (J); non-detects are not qualified.

## 6. LABORATORY CONTROL SAMPLE

All spike recoveries were within QC limits, with the exception of the recovery of Chlorobenzene which was out of range high.

## 7. FIELD BLANK AND FIELD DUPLICATE

There was no field blank or field duplicate pair submitted with this case. The required sampling method is not conducive to generating field duplicates; therefore, the data is of acceptable quality.

### 8. INTERNAL STANDARDS

The internal standards' retention times and area counts for the VOA fraction were all within the required QC limits: therefore the results are acceptable.

## 9. COMPOUND IDENTIFICATION

Target compounds (TCLs) and Tentatively Identified Compounds (TICs) were identified using a "best fit" library search method. The lab also included the quality of spectrum matches for the TICs reported.

## 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All samples were VOST cartridges. All VOAs target CRQLs were properly reported. All target compound quantitation was properly reported. All results were reported as total ng present.

### 11. SYSTEM PERFORMANCE

The GC/MS baseline indicated acceptable performance.

## 12. ADDITIONAL INFORMATION

Reviewed by: Thomas Sedlacek Lockheed Martin/ESAT Date: April 20, 1999

## ORGANIC DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature used in this document, the following code letters and associated definitions are provided:

VALUE - when/if the result of a value is greater than or equal to the Contract Required Quantitation Limit (CRQL).

- U Indicates that the compound was analyzed for, but not detected. The sample quantitation limit corrected for dilution and percent moisture is reported.
- J Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound where the result is less than the sample quantitation limit, but greater than zero. The flag is also used to indicate a reported result having an associated QC problem.
- R Indicates the data are unusable. (NOTE: The analyte may or may not be present.)
- N Indicates presumptive evidence of a compound. This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search.
- P Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns. The lower of the two results is reported.
- C Indicates pesticide results that have been confirmed by GC/MS.
- B Indicates the analyte is detected in the associated blank as well as in the sample.
- E Indicates compounds whose concentrations exceed the calibration range of the instrument.
- D Indicates an identified compound in an analysis has been diluted. This flag alerts the data user to any differences between the concentrations reported in the two analysis.
- A Indicates tentatively identified compounds that are suspected to be aldol condensation products.
- G Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method.
- L Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method.
- T Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample.

X,Y,Z are reserved for laboratory defined flags.

## CAUBRATION OUTLIER Voletke TCL Page 1 of 1)

CASE'SAS 8: DACW45-49-1-04 COLUMN:

LABORATORY: O HIP-TOXIC BITE NAME: HIMEO DO

strument 10: M:09.0		Initia NUU >	el Cal.		Cont.	Cal.	!	Cont	t. <b>Ca</b> l.		Cont	t. Cal.		Cont.	Cal.	
ite:		U >:				1:11		<b></b>			1-			+		
ne:		RF.	22.50	1.	RF	1	•	RF	T 20	1.	RF.	7 m	1.	RF	20	1.
Chloromethane	0.010	1	<del> </del>	一	-	-			<b>†</b>	十	†	十	<del> </del>	1	<del> </del>	<del>+-</del>
Eramonethane	0.100	<b> </b>	-	-	<b></b>				+	+	1	1	+	+		+
Vinyl Chloride	0.100		-	-					1	1	1	1	1	1		+
Chloroethane	0.010	<del></del>	<del>                                     </del>	1					1	1	1	1	1	1		+-
Methylene Chloride	0.010	<del></del>								1	1	1	1_			+
Acetone		0.007	1449	15	0.030	560	5_	<u> </u>	1	1	1	1_	1_	1		1
Carbon Disulfide	0.010	1			<u> </u>				1	1	1	1	1	1		
1,1-Dichloroethene	0.100	<del>1</del>									1	1	1	1		
1,1-Dichloroethane	0.200	<del></del>	1						1	1	1	1	1	<b>†</b>		1
1,2-Dichloroethene (total)	0.010	<del></del>	1						1	1		1_	1_	<b>T</b>		1_
Chloroform	0.200	<del></del>							1	1_	1	1_	1_	1		
1,2-Dichloroethane	0.100								1	1	1	1	1_			<b>→</b> -
Z-Butanone	0.010	0.001	16.32	R												1_
1,1,1-Trichloroethane	0.100											<b>T</b>	I	1		
Carbon Tetrachloride	0.100	1										$T_{\underline{}}$		1		
Bromodichloromethane	0.200											<u> </u>	$\bot$	Τ		L
1,2-Dichloropropane	0.010											T	$\perp$			<u> </u>
3-Dichloropropene	0.200										<u> </u>	$\perp$	1_	<u> </u>		1_
rioroethene	0.300		<u> </u>	<u> </u>									1			
Dibromochloromethane		0.747	1			34.0		<u></u>	1	1		1	1		1	4_
1,1,2-Trichloroethane		0415		1_	0.790	<del></del>			1	1_	1		1	1	<b></b>	
Benzene	0.500	1.4 6!		1_	1,328	F 35.3 °	17	1	1	1	1		4		1	1
trans-1,3-Dichioropropene	0.100	<del></del>	1	1_	<del></del>	<u> </u>	ٔــــا	↓	4	4_			4_		1	-
Bromoform	<del></del>	1.318	1	<del> </del>	0.43.9	-329	1	<del></del>	4	4_	↓	4	4		<del> </del>	
4-Methyl-Z-Pentanone	0.010	<del></del>	1	↓_	<del></del>	1	<b>1</b>	<b></b>		4_	1	4	4_		1	4
2-Kexanone	0.010		1	1_	<u> </u>	<b>_</b>	↓	1	1	1					1	<u></u> .
Tetrachloroethene	0.200	1	1_	1	<u> </u>		1_	1		1_	1_				1	$\overline{}$
1,1,2,2-Tetrachloroethane	0.300	,]	<u></u>		<u></u>	1	<u></u>				1	1_		]		1
Toluene	0.400	<u>,                                     </u>									T	<u> </u>		]		1
Chlorobenzene	0.500	,	T						T	<b>T</b> _	T			7		
Ethylbenzene	0.100	,	1	T		1			1	T	1	T	T	T	T	
Styrene	0.300	<del></del>	1	1	1	1	1	1	1	1	1	1	7	1	1	
Xylene (total)	0.300	<del></del>	+	+	1	1	1	1	+	+	1	1	+	+	1	
Toluene-d.	0.010	<del></del>	十	十	†	†	十	†	十	十	十	十	十	+	<b>†</b>	T
Branafluorobenzene	0.200	<del></del>	+	+	+	+	+	+	+	1	1	1	1	1	+	1
1,2-Dichloroethane-d	0.010		+	1	+	1-	+-	1-	1	1	1	<del>-1</del>	1	1	1	1

ffected Samples:



Le> 12/1:- 1702	
LB Odle	
77 2 7724	
7711 7719	
דטרך דגור	

Reviewer's Init/Date: 265 4/15/32

LABORATORY: AIR TOXICS LTD.

PRP CASE

SITE NAME: Hinco Dump Superfund Site

SDG: 7210A/B

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

This review covers six VOST cartridges samples numbered:7210A/7210B, 7208A/7208B, 7212A/7212B, 7220A/7220B, 7204A/7204B and 7218A/7218B collected on 11/11/98. An Environmental Analytical Laboratory Air Toxics LTD of Folsom CA, received the samples on 11/12/98 in good condition. The samples were analyzed for Volatiles (dissolved gases) following SW846 Methods 5041A/8260B.

All sample analysis were performed within the technical holding time of fourteen (14) day after sample collection; therefore, the results are acceptable.

Sample 7208A/7208B could be not desorbed and anlyzed due to heavy matrix (thick black liquid).

The reviewer's narrative and data qualifiers are noted in the following pages.

Reviewed by: \_\_\_\_Krystyna Minczuk\_Lockheed-Martin Date:\_April 16<sup>th</sup>, 1999\_\_

## Regional Transmittal Form

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

	DATE:	
	SUBJECT:	Review of Daca Received for Review on 15 APAIL 1999
	FROM:	Stephen L. Ostrodka, Chief (HSRL-5J) for Items of stables Superfund Technical Support Section Williams I fold a q
	ТО:	Data User: U.S. Army Coms of thus
	We have r	eviewed the data for the following case:
	SITE NAME	: Hinco Dump Superfund Site
	CASE NUMB	ER: PRP SDG NUMBER: 7210A/13
	Number an	d Type of Samples: 6 (cartnidues)
		imbers: 7210A/15,7205A/15,1212A/15,7220A/15,7204A/15,7218A/15
	Laborator	y: Air Toxics Ltd Hrs. for Review: 9
X	to data	are our findings: Museable and acceptately with the
reali		our Seculud in the attached warratur
	mel	und L Byins

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

LABORATORY: AIR TOXICS LTD.

PRP CASE

SITE NAME: Hinco Dump Superfund Site

SDG: 7210A/B

### 7.FIELD BLANK AND FIELD DUPLICATE

There were no sample specified as a field blank or field duplicate in this data

## 8.INTERNAL STANDARDS

The internal standards area counts for 1,4-Dichlorobenzene-d4 was below the QC limit in sample 7212A/7212B.

The positive results for the target compounds which are associated with 1,4-Dichlorobenzene-d4 for sample 7212A/7212B should be considered estimated "J", and non-detected quantitation limits should be considered estimated "UJ".

Please, refer to Table 4 for the list of associated compounds for 1,4-Dichlorobenzene-d4.

### 9. COMPOUND IDENTIFICATION

The target compounds and TICs for the Volatile fractions were correctly identified.

## 10.COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The Volatile Target Compounds (TCLs) and Tentative Identified Compounds (TICs) were properly quantitated; therefore, the data are acceptable.

## 11.SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

## 12.ADDITIONAL INFORMATION

Target compound Tetrachloroethane exceeded the calibration range in sample 7210A/7210B. This sample was not reanalyzed.

Reviewed by: \_\_\_\_Krystyna Minczuk\_\_Lockheed-Martin Date:\_\_April 16<sup>th</sup>, 1999\_\_

LABOPATORY: AIR TOXICS LTD. PRP CASE

SITE NAME: Hinco Dump Superfund Site SDG: 7210A/B

## 1.HOLDING TIME

Six VOST cartridges samples numbered:7210A/7210B, 7208A/7208B, 7212A/7212B, 7220A/7220B, 7204A/7204B and 7218A/7218B were collected on 11/11/98. An Environmental Analytical Laboratory Air Toxics LTD of Folsom CA, received the samples on 11/12/98 in good condition. The samples were analyzed for Volatiles (dissolved gases) following SW846 Methods 5041A/8260B.

All sample analysis were performed within the technical holding time of fourteen (14) day after sample collection; therefore, the results are acceptable.

### 2.GC/MS TUNING PERFORMANCE AND GC PERFORMANCE

All GC/MS tuning complied with the mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

## 3.CALIBRATION

Initial and continuing calibration standards of Volatile were evaluated for the Target Compounds List (TCLs) and outliers were recorded on the outlier forms included as a part of this narrative.

### 4.METHOD BLANK

The Volatile Laboratory Blank was clean; therefore, the results are

## 5.SURROGATE RECOVERIES

Surrogate 4-Bromofluorobenzene in sample 7212A/7212B (211%) was above QC limit (78-119%). Positive Volatile results in sample 7212A/7212B should be considered estimated "J", non-detected do not need qualification.

## 6.LABORATORY CONTROL SAMPLES

All spike recoveries in the laboratory control sample LCS QCSP were within the QC limits; therefore, the results are acceptable.

Reviewed by: Krystyna Minczuk Lockheed-Martin
Date: April 16<sup>th</sup>, 1999

## ORGANIC DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature used in this document, the following code letters and associated definitions are provided:

**VALUE** - when/if the result of a value is greater than or equal to the Contract Required Quantitation Limit (CRQL).

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- R Indicates the data are unusable. (NOTE: The analyte may or may not be present.)
- N Indicates presumptive evidence of a compound This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search.
- P Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns. The lower of the two results is reported.
- C Indicates pesticide results that have been confirmed by GC/MS.
- B Indicates the analyte is detected in the associated blank as well as in the sample.
- E Indicates compounds whose concentrations exceed the calibration range of the instrument.
- D Indicates an identified compound in an analysis has been diluted. This flag alerts the data user to any differences between the concentrations reported in the two analysis.
- A Indicates tentatively identified compounds that are suspected to be aldol condensation products.
- G Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method.
- L Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method.
- T Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample.
- X,Y,Z are reserved for laboratory defined flags.

## CALIBRATION OUTLIERS VOLATILE TCL COMPOUNDS

(Page 1 of 1)

Pg 5 of

	- 1	(1
CASE\SAS#:	<u> </u>	
COLUMN:		
HEATED PUR	GE (Y/N):	

SITE NAME: MINICO DUMP

Instrument#			ial Cal.   Contin. Cal.					Co	ontin. Ca	1.	Co	ntin. Ca	1.	Со	Contin. Cal.		
Date/Time:					*		1.3C										
	#	rf		*	rf			rſ	1 %d	*	rf	9€d	1 *	rf	<b>1</b> % d	*	
Chloromethane	0.01	الرمي	131-92	IJ	1.409	<u> </u>						1	1			1	
Bromomethane	0.10		<u> </u>	1	<u></u>	<u> </u>	11		1			1			<u> </u>	1	
Vinyl chloride	0.10		<u></u>	1		<u> </u>	$\perp$		1	1_1						1	
Chloroethane	0.01	L		1	<u> </u>	<u> </u>	1 1		1	1 1		1				1	
Methylene chloride	0.01				<u>L</u>	1	1 1		<u> </u>	1		1			L		
Acetone	0.01	1059	137.01	IJ	1.07/	İ			1			<u> </u>	Ī. Ī			I	
Carbon disulfide	0.01			1	L	Ī.				$\overline{1}$		1			1	Ī	
1,1-Dichloroethene	0.10		1	L	!	Ī				1 1		I			1	ī	
1,1-Dichloroethane	0.20			1		]			1						1	$\overline{}$	
1,2-Dichloroethene (total)	1 1		1	1	1	1			Ī			1	1 1			T	
Chloroform	0.20		i	1	1	ī	ī		ī	1		1	1 1		1	ī	
1,2-Dichloroethane	0.10		1	!	Ī	Ī	1 1		1	1 1		<del>                                     </del>	1 1		!	$\overline{1}$	
2-Butanone	0.01		 	ī	1	i I			<del></del>	1 1		Ì			1	T	
1,1,1-Trichloroethane	0.10		<u> </u>	ì	i	Ì			i	1 1		<del></del> -	1 1		i	<del>†</del>	
Carbon tetrachloride	0.10		1	1	1	1	1 1		1	1 1		<del>1</del>	1 1		i	<del></del>	
Bromodichloromethane	10.20			Ì	<del> </del>	!	1 1		<del>:</del>	1 1		<u>                                     </u>	<del>                                     </del>		1	+	
1.2-Dichloropropane	! !		<u> </u>	1	1	1	1 1		1	1 1		1	1 1		1	+	
cis-1,3-Dichloropropene	0.20		<u> </u>	i	1	1	+ +		<del> </del> -	+ +		1	1 1		1	+	
Trichloroethene	0.30		1	<del>                                     </del>	!	L	1 1		<del> </del>	1 1		<u> </u>	1 1		1	+-	
Dibromochloromethane	0.10		<u> </u>	<del></del>	!		1 1		<del></del>	1 1	<del></del>	<del> </del>	<del>                                     </del>		1		
1,1,2-Trichloroethane	0.10		!	<del> </del>	l	1	1 1		<del> </del>	1		<del></del>	<del>                                     </del>		<del>!</del> _	+	
	0.50		<del> </del> -	1	<del></del>	1	1 1		<del>-}</del> -	1 1		<del> </del>	1 1		<del>                                     </del>	+	
tran-1,3-Dichloropropene	0.10		<del></del> -	<u> </u>	I	<del></del>	1 1		<del></del>	<del></del>		<del></del> _	11	<del></del>	<u> </u>	+-	
Bromoform	0.10	<u> </u>	<u>.                                    </u>	1	I	l	1 1		. <del></del>	<del></del>		<del> </del> -	1 1		<del>!</del>	<del> </del>	
4-Methyl-2-pentanone	0.01		<u>}</u>	<del>                                     </del>	<u>}</u>	1	1 1		1	1 1		<del></del>	<del>1 1</del>		<del>}</del>	+-	
2-Hexanone	0.01		<u> </u>	1	<u> </u>	-	1 1		<del></del> -	+-+		<del> </del>	1 1		<del> </del>	<del>+</del>	
Tetrachloroethene	10.20		<u> </u>	<del> </del>	<u> </u>	<u> </u>	++		<del> </del>	+-+		<u> </u>	<u>                                     </u>			+	
<del></del>			<u> </u>	<del> </del>	L	<u> </u>	1 1		<del>-</del>	1 1		<del> </del>	<u>il</u>		<u> </u>	+	
1,1,2,2-Tetrachloroethane	0.50	l	<u>i                                     </u>	+	<u> </u>	<u>i                                     </u>	<u>! i</u>		<u> </u>	1 1		<del></del>			<del> </del>	<del> </del>	
Toluene	0.40	<u> </u>	<u>i                                     </u>	<del> </del>	<del>!</del>	ļ	+		<del></del> -	1		<del> </del>	<u> </u>		<del> </del>	<del></del>	
Chlorobenzene	0.50			<del> </del>	<del> </del>	<del> </del>	<del>  </del>		<u> </u>	1		<del> </del>	!!	<del></del>		+	
Ethylbenzene	0.10		<del> </del>	<u> </u>	1	<u> </u>	4-4		<del></del>	4		<u> </u>	1 1		<u> </u>	+	
Styrene	0.30		<del></del>	1	<u> </u>	<del> </del>	<del>! !</del>		<del> </del>	<del>                                     </del>		1	ب		<del> </del>	+-	
Xvlene (total)	[0.30]	<u> </u>	<del> </del>	<del> </del>	<del></del>	<u> </u>	<del>   </del>		<del>                                     </del>	<del>                                     </del>		!	<del>                                     </del>		<del> </del>	<del> </del>	
= :			<u> </u>	<del>                                     </del>	1	<del>  </del>	+!		<del> </del>	+ - !		<del> </del>	+		<u> </u>	<del> </del>	
Toluene-d8			<u> </u>	<del> </del>	<u> </u>	<u> </u>	1-1		<del></del>	<del>                                     </del>		<del> </del>	<u> </u>		<u> </u>	<del> </del>	
Bromofluorobenzene	0.20	<u> </u>	<del>!</del> -	<del>!</del>	<del>  </del>	<u> </u>			<del>-</del>	1		<u> </u>	<u> </u>	<u> </u>	<u> </u>	<del>-</del>	
1,2-Dichloroethane-d4	إحسا		l	ـــــ	1 00	1	1		<u> </u>	للل		1				ــــــــــــــــــــــــــــــــــــــ	
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		i						L			L			1			

Reviewer's Init/Date:

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

- These flags should be applied to the analytes on the sample data sheets.
- # = Minimum Relative Response Factor



## Regional Transmittal Form

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

	DATE:	
		Review of Data Received for Review on
	FRCM:	Stephen L. Ostrodka, Chief (HSRL-5J) for Littue ostrodkic Superfund Technical Support Section (reliminal Joynal)
	TO:	Data User: U.S. ARMY CORPS of ENGS.
e ,	We have r	eviewed the data for the following case:
	SITE NAME	: HIMCO DUMP
	CASE NUMB	ER: DACWA5-99-P-0094 SDG NUMBER: 7703 A & B
		d Type of Samples: 5 Tenax Tube Are Dis. GAS
	Sample Nu	mbers: 7703 AiB, 7705 AiB, 7706 A&B, 7708 A & Bond 7704 AB
		y: AIR TOXICS LTD Hrs. for Review:
T ·al	to data	are our findings:  , is weight and acceptable with the ions discribed in the attached invitation
-	M	Arrel & Byril.

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

## **TABLE 4**

(For Low Concentration water)

## VOLATILE INTERNAL STANDARDS WITH CORRESPONDING TCL ANALYTES ASSIGNED FOR QUANTITATION

1,4-Difluorobenzene	Chlorobenzene-d,	1.4-Dichlorobenzene-d.
Chloromethane	4-Methyl-2-pentanone	Bromoform
Broinomethane	1,1,1-Trichloroethane	1,2-Dibromo-3-chloropropane
Vinyl chloride	Carbon tetrachloride	1,2-Dichlorobenzene
Chloroethane	Bromodichloromethane	1,3-Dichlorobenzene
Methylene chloride	1,2-Dichloropropana	1,4-Dichlorobenzen
Acetone	trans-1,3-Dichloropropens	
Carbon disulfide	Trichloroethene	
1,1-Dichloroethene	Dibromochloromethane	
1,1-Dichloroethane	1,1,2-Trichloroethane	
4-Bromofkiorobenzene	Benzene	
Chloroform	cis-1,3-Dichloropropene	
1,2-Dichloroethane	Chlorobenzene	
1,2-Dichloroethane-d <sub>4</sub> (surr,smc)	1,2-Dibromomethane	
2-Butanone	Ethylbenzene	
Bromochloromethane	2-Hexanone	
cis-1,2-Dichloroethene	Styrene	
trans-1,2-Dichloroethene	Xylene(total)	
	Toluene	
	Tetrachloroethene	
	1,1,2,2-Tetrachloroethane	

## SEMIVOLATILE INTERNAL STANDARDS WITH CORRESPONDING TCL ANALYTES ASSIGNED FOR QUANTITATION

1,4-Dichlorobenzene-d,	Naphthalene-d.	Acenephthene-d <sub>1e</sub>	Phenanthre-ie-die	Chrysene-d <sub>12</sub>	Perylene-d <sub>12</sub>
Phenol bis(2-chlorosthyl)ether 2-Chlorophenol 2-Methylphenol bis(2-chlorolsopropyl)ether 4-Methylphenol N-nitroso-di-n-propylamine 2-Fluorophenol(surr) Phenol-d <sub>e</sub> (surr)	Nitrobenzene lsophorone 2-Nitrophenol 2,4-Dimethylphenol 2-Methylnaphthalene bis(2-Chloroethoxy)methane 2,4-Dichlorophenol Nitrobenzene-de(surr) 4-Chloroaniline Hexachlorobutadiene 4-Chloro-3-methylphenol	Hexachlorocyclopentadiene 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2-Chloronaphthalane 2-Nitroaniline Dimethylphthalate Acenaphthylene 3-Nitroaniline Acenaphthene 2,4-Dinitrophenol 4-Nitrophenol Dibenzofuran 2,4-Dinitrotoluene 2,6-Dinitrotoluene Diethyl phthalate 4-Chlorophenyl phenyl ether Fluorene 4-Nitroaniline 2-Fluorobiphenyl(surr) 2,4,6-Tribromophenol(surr)	4,6-Dinitro-2-methylphenol N-nitroso-di-phenylamine 1,2-Diphenylhydrazine 4-Bromophenyl phenyl ether Hexachlorobenzene Pentachlorophenol Finenanthrene Anthracene Di-n-butyl phthalate Fluoranthene	Pyrene butylbenzyi phthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene bis(2-Ethylhexyl)phthalate Chrysene Terphenyl-d <sub>14</sub> (surr)	Di-n-octyl phthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenzo(a,h)anthracene Benzo(g,h,l)perylene
laurr irrogate		`,			7

Contractor: Air Toxics Ltd

Case #:DACW45-99-P-0094

Site:

Himco Dump (IN)

SDG: 7703 A&B

## 1.HOLDING TIMES

This case consists of 5 VOST samples 7703 A&B, 7705 A&B, 7706 A&B, 7708 A&B, and 7709 A&B. According to the laboratory COC these samples were sampled on December 9, 1998 and were received by the laboratory on December 10, 1998, no field COC was part of this case. This case was completed on December 15, 1998, thus meeting holding time requirements. All samples were analyzed for volatiles (dissolved gases). All samples were analyzed according to SW 846 methods 5041A/8260B.

## 2.GC/MS TUNING

All volatile GC/MS tuning complied with the mass list and ion abundance criteria for BFB, and all samples were analyzed within the 12 hour periods for instrument performance checks, therefore all results are acceptable.

## 3.CALIBRATION

Initial and continuing calibrations of the volatiles standards were evaluated for the specified target compound list and outliers are recorded on the forms included as part of the narrative.

## 4.BLANKS

The volatile low level Lab Blank contained the chemical bromoform 25 ng, and contained no TICs. The presence of bromoform in the samples associated with this Lab Blank is flagged "U" when the sample results is less than five (5) times the blank concentration.

## 5.SURROGATE RECOVER

The volatile surrogate compound 1,2dichloroethane-d4 was high and out of QC limits in samples 7705 A&B, 7701 A&B, 7708 A&B, 7709 A&B, Lab Blank, and LCS. In these samples positive detects are estimated (J) and nondetects need no qualification. Volatile surrogate 4bromofluorobenzene was high and out of QC limits in sample 7708 A&B. As this sample is already qualified above no further qualification is needed.

## 6.LCS

The LCS that was run with this set had high % recoveries for acetone, carbon disulfide, and 2hexanone. No qualification of the data is done based on LCS recoveries.

## 7.FIELD BLANKS AND FIELD DUPLICATES

None were listed on the COC.

## 8.INTERNAL STANDARDS

The volatile internal standards for the low level analysis were within the laboratories QC limits for all samples, therefore, the results are acceptable.

Reviewed by: M. Kaminsky Lockheed-Martin/ESAT

Date:

April 15, 1999

ID:3128864071

MAY 19'99

9:15 No.004 P.03

1 of 4

NARRATIVE

Contractor:

Air Toxics Ltd

Casc #:DACW45-99-P-0094

Site:

Himco Dump (IN)

SDG: 7703 A&B

This case consists of 5 VOST samples 7703 A&B, 7705 A&B, 7706 A&B, 7708 A&B, and 7709 A&B. According to the laboratory COC these samples were sampled on December 9, 1998 and were received by the laboratory on December 10, 1998, no field COC was part of this case. This case was completed on December 15, 1998, thus meeting holding time requirements. All samples were analyzed for volatiles (dissolved gases). All samples were analyzed according to SW 846 methods 5041A/8260B.

The reviewer's narrative and data qualifiers are noted in the following pages.

Reviewed by: M. Kaminsky Lockheed-Martin/ESAT

Date:

April 15, 1999

3 of 4

## NARRATIVE

Contractor:

Air Toxics Ltd

Case #:DACW45-99-P-0094

Site:

Himco Dump (IN)

SDG: 7703 A&B

## 9.COMPOUND IDENTIFICATION

After reviewing the mass spectra it appears that all VOA compounds were properly identified.

## 10.COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All CRQLs were properly reported and a bag dilution was performed on sample 7705 A&B to screen the samples. All target compounds and TICs appear to be properly reported.

## 11.SYSTEM PERFORMANCE

GC/MS baselines indicated acceptable performance.

## 12.ADDITIONAL INFORMATION

None.

Reviewed by: M. Kaminsky Lockheed-Martin/ ESAT

Date: April 15, 1999

## **CALIBRATION OUTLIERS VOLATILE TCL COMPOUNDS**

^	(Page 1 of 1)	1º 54
CASE/SAS#: OAGWAT		LABORATORY: (L) (2000, 67)
COLUMN:		SITE NAME: Fire Diago
HEATED PURGE (Y/N):		

Instrument# 11\5137 4	_ []	Initia			Contin. Cal.			Contin. Cal.			Cor	ntin. Cal	Contin. Cal.			
Date/Time:	11	11-2	3 (* 7	19	1211 1-20			<u> </u>		1						
	#	rf	%rsd		rf	1 %d	*	rf	1 %d	*	rf	<b>%</b> d	*	_f	%d	*
Chloromethane	[0.01]			<u> </u>		<u> </u>	لــــــــــــــــــــــــــــــــــــــ						1_1		L	1_
Bromomethane	[0.10]		L	<u> </u>	L	1			<u></u>			L				1
Vinyl chloride	[0.10]		L	<u> </u>					1						<u> </u>	1
Chloroethane	[0.01]		L	L	L		لسل		<u> </u>						<u> </u>	1
Methylene chloride	0.01			<u> </u>	L	<u></u>							$\Box$			1
Acetone	0.01	6667	7491	L		1			<u> </u>	11					<u></u>	1
Carbon disulfide	[0.01]					<u></u>		<u> </u>	<u></u>						L	1_
1,1-Dichloroethene	0.10		<u></u>													L
1,1-Dichloroethane	[0.20]			L		L			1						Ĺ	Ī.
1,2-Dichloroethene (total)	$\perp$ $\perp$ $\perp$				L	1			1				$\Box$		L	1
Chloroform	0.20					L			1				$L^{-}J$		L	Ī.
1,2-Dichloroethane	0.10					1			1						1	1
2-Butanone	0.01				1	1	1. 1		İ			1	1 1		!	1
1,1,1-Trichloroethane	0.10				1	1	1 1		1	! 1	1		1 1		1	Ī
Carbon tetrachloride	0.10				!	1			Ī	Ī			1		Ī	ī
Bromodichloromethane	[0.20]					1			1						1	Ī
1,2-Dichloropropane	1 1	25/9		Ī	15416	1-/:	15		l						1	Ī
cis-1,3-Dichloropropene	0.20		!	1		<del> </del>	1		1						Ī	1
Trichloroethene	[0.30]					1				1 1		}			Ī	Ī
Dibromochloromethane	0.10			<u> </u>	1	Ī	ī		1						1	Ī
1,1,2-Trichloroethane	[0.10]			1	!	1			]						1	Ī
	0.50			1		1	!	1		1		!			l	T
tran-1,3-Dichloropropene	0.10			Ì		1	1			1 1			1		1	1
Bromoform	0.101				1	1						L			1	Ī
4-Methyl-2-pentanone	0.01	1217	42.67	1.	<u> </u>	1			1	11		<u> </u>			1	1
2-Hexanone	0.01			L	<u> </u>		1!			1 1		L				1
Tetrachloroethene	0.20			1		1				1					ļ	1
1,1,2,2-Tetrachloroethane	[0.50]	0554		Ī	0141	423 4	1 :		1							1
Toluene	0.40			1		Ī	1		1	1		1	1			Ī
Chlombenzene	10.50					ī	1	1	1			1	Ī		1	ī
Ethylbenzene	0.10			<del></del>		1	Ī		1	1		]	Ī		1	Ī
Styrene	0.30			!	1	i	Ī		i			Ì	ī		Ī	ī
Xylene (total)	10.301			!	1	Ī	Ī		1	1		1	Ī		Ī	T
	1 1				i	1	Ī	1	Ī			1	1	1	1	Ī
Toluene-d8	1 1			1	i	İ	ī	i i	ī			Î .	Ī	l	1	+
Bromofluorobenzene	0.20			1	1	Ī	1	1	1	]		1	Ī	1	ī	1
1.2-Dichloroethane-d4	1 1		1	1	1	1	1	1	1	1		1	1	1	1	ī
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					1			í			i			1		

Reviewer's Init/Date: (W/K 4-15 49

J/R = All positive results are estimated "I" and non-detected results are unusable "R"

These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

ESAT-5-055.4 1/95

## ORGANIC DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature used in this document, the following code letters and associated definitions are provided:

**VALUE** - when/if the result of a value is greater than or equal to the Contract Required Quantitation Limit (CRQL).

- U Indicates that the compound was analyzed for, but not detected. The sample quantitation limit corrected for dilution and percent moisture is reported.
- Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound where the result is less than the sample quantitation limit, but greater than zero. The flag is also used to indicate a reported result having an associated QC problem.
- R Indicates the data are unusable. (NOTE: The analyte may or may not be present.)
- N Indicates presumptive evidence of a compound. This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search.
- P Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns. The lower of the two results is reported.
- C Indicates pesticide results that have been confirmed by GC/MS.
- B Indicates the analyte is detected in the associated blank as well as in the sample.
- E Indicates compounds whose concentrations exceed the calibration range of the instrument.
- D Indicates an identified compound in an analysis has been diluted. This flag alerts the data user to any differences between the concentrations reported in the two analysis.
- A Indicates tentatively identified compounds that are suspected to be aldol condensation products.
- G Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method.
- L Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method.
- T Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample.
- X,Y,Z are reserved for laboratory defined flags.

## Regional Transmittal Form

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION $\mathbf{V}$

	DATE:	
		Review of Data Received for Review on
	FROM:	Stephen L. Ostrodka, Chief (HSRL-5J) for Structure Superfund Technical Support Section prolund Lognitic T/6/19
		Data User: U.S. Army Corps of Engineers
	We have r	eviewed the data for the following case:
	SITE NAME	: Himco Dump (Indiana)
		ER: DACW 45-99-P-0094 SDG NUMBER: 7111 A + B
	Number an	d Type of Samples: 5 sorbent cartridges with air Samples
		mbers: 7111A+B, 7207 A+B, 7214A+B, 7213A+B, 7114A+B
	Laborator	y: Air Toxics Ltd (CA) Hrs. for Review: 11.5
Atra di	a cla	are our findings: to is useable and acusetable with ications described in the attended nurration
-viv 9)	AND	hart I Dynil

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

LABORATORY: Air Toxics Ltd. (CA) PRP PROJECT # DACW45-99-P-0094 SITE NAME: Himco Dump (Indiana) SDG: 7111A&B

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

This PRP case is the analytical results of five sorbent cartridges containing air samples from the Himco Dump site in Omaha, NE (7111A&B, 7207A&B, 7214A&B, 7213A&B and 7114A&B). The samples were collected on 11/17/98, and Air Toxics Ltd. of Folsom, CA received the samples on 11/18/98 in good condition. The samples were collected according to SW-846 Method 5041A (Analysis for Desorption of Sorbent Cartridges from Volatile Organic Sampling Train) and analyzed by Method 8260B on 11/30/98 for selected volatile analytes (VOCs). The samples were analyzed within fourteen days from collection; therefore, their holding time results are acceptable.

Sample results are reported with units of nanograms (ng).

Matrix spike analyses are not applicable to these types of samples. A Laboratory Control Sample (LCS) was spiked with VOCs, and the raw data were submitted with this case.

According to the sample information submitted with this case, field blanks and field duplicates were not submitted.

The reviewer's narrative and data qualifiers are noted in the following pages.

Reviewed by: Anthony Gugliotta, Lockheed/ESAT Date: April 16<sup>th</sup>, 1999

LABORATORY: Air Toxics Ltd. (CA) PRP PROJECT # DACW45-99-P-0094 SITE NAME: Himco Dump (Indiana) SDG: 7111A&B

### 1. HOLDING TIMES

The five sorbent cartridges samples of this PRP case are: 7111A&B, 7207A&B, 7214A&B, 7213A&B and 7114A&B. The air samples were collected on 11/17/98, and Air Toxics Ltd. of Folsom, CA received them on 11/18/98 in good condition. The samples were collected according to SW-846 Method 5041A (Analysis for Desorption of Scrbent Cartridges from Volatile Organic Sampling Train) and analyzed by Method 8260B on 11/30/98 for selected volatile analytes (VOCs). The samples were analyzed within fourteen days from collection; therefore, their holding time results are acceptable.

## 2. GC INSTRUMENT PERFORMANCE CHECKS

All GC/MS instrument performance checks for BFB complied with their mass list and ion abundance criteria, and all samples were analyzed within the twelve-hour periods for instrument performance checks.

## 3. CALIBRATIONS

The initial calibration and the continuing calibration check standard were evaluated for the Target Compounds List (TCLs).

All samples were quantitated based on the calibration factors obtained from the initial calibrations.

## 4. METHOD BLANKS

No target analytes or TICs were detected in the Method Blank of . 11/30/98.

No other blank data were submitted in this case.

## 5. SURROGATE RECOVERIES

The volatile system monitoring compounds were within the QC limits for all samples.

LABORATORY: Air Toxics Ltd. (CA) PRP PROJECT # DACW45-99-P-0094 SITE NAME: Himco Dump (Indiana) SDG: 7111A&B

## 6. MATRIX SPIKE/SPIKE DUPLICATES AND LABORATORY CONTROL SPIKE (LCS)

Matrix spike analyses are not applicable for these samples.

In the LCS sample of 11/25/98, four compounds (acetone, carbon disulfide, 2-butanone and 4-methyl-2-pentanone) had recoveries which exceeded 150%. Positive results of these four compounds in any of the associated samples should be qualified with a "J" (estimated concentration).

## 7. FIELD BLANKS AND FIELD DUPLICATES

Field blanks and field duplicates were not submitted.

### 8. INTERNAL STANDARDS

The internal standards areas and retention times of the volatile and semivolatile samples were within the QC limits.

## 9. COMPOUND IDENTIFICATION

## Sample 7111A&B

The mass spectrum of carbon disulfide shows the presence of iodomethane and a Freon. The Laboratory should indicate if the concentrations of these compounds are high enough to be reported.

## Sample 7207A&B

1,2-Dichloroethane should not have been reported in this sample because the submitted mass spectrum indicates a cycloalkane.

The mass spectrum of vinyl chloride shows the presence of chlorofluoromethane and an alkane. The mass spectrum of chloroethane shows the presence of a TIC with an ion at m/z 60. The mass spectrum of carbon disulfide shows the presence of Freon 113 (1,1,2-trichloro-1,2,2-trifluoroethane). The mass spectrum of toluene shows the presence of a cycloalkane. The Laboratory should indicate if the concentrations of these compounds are high enough to be reported.

Reviewed by: Anthony Gugliotta, Lockheed/ESAT Date: April 16<sup>th</sup>, 1999

LABORATORY: Air Toxics Ltd. (CA) PRP PROJECT # DACW45-99-P-0094 SITE NAME: Himco Dump (Indiana) SDG: 7111A&B

## Sample 7214A&B

The TIC which elutes at 9.24 minutes should have be called an unknown alkane, not octyl trifluoroacetate.

The mass spectrum of chloroethane shows the presence of a TIC with an ion at m/z 60. The mass spectrum of carbon disulfide shows the presence of a Freon. The mass spectrum of trans-1,2-dichloroethene shows the presence of a TIC (possibly hexane). The mass spectrum of m/p-xylene shows the presence of an alkyl-substituted cycloalkane. The Laboratory should indicate if the concentrations of these compounds are high enough to be reported.

## Sample 7213A&B

The mass spectra of vinyl chloride shows the presence of a chlorofluoromethane and another TIC (possibly butane or 2-methylpropane). The mass spectrum of bromomethane shows the presence of a TIC with an ion at m/z 73. The Laboratory should indicate if the concentrations of these compounds are high enough to be reported.

The TIC which elutes at 0.84 minutes may have be called propane or an unknown TIC, but it should not have been labeled as 2-butenal due to a poor match with the reference spectrum.

## Sample 7114A&B

The mass spectra of vinyl chloride and chloroethane each show the presence of a Freon. The mass spectrum of trans-1,2-dichloroethene shows the presence of a TIC (possibly hexane). The Laboratory should indicate if the concentrations of these compounds are high enough to be reported.

Except for 1,2-dichloroethane in sample 7207A&B (noted above), all target compounds were correctly identified.

## 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The volatile target compounds (TCLs) in all samples were properly quantitated. The CRQLs were adjusted to reflect all sample dilutions.

Reviewed by: Anthony Gugliotta, Lockheed/ESAT Date: April 16<sup>th</sup>, 1999

## CALIBRATION OUTLIERS

				V	OLATII	LE TCL	CO	MPOUN	IDS .					8		
		_				(Page 1	of 1	)								
CASE\SAS#: PRP PR COLUMN:	oiect	# 1	ACW!	45-					LAE	ORA	TORY:	AIR Imcc.	To	KICS	LTD	(CA)
COLUMN:	J		99	7-P	-0099	1			SITT	E NA	ME: h	imce .	Dim	O HO	111-11	<del></del>
HEATED PURGE (Y/N):											مست			7 /2	ورمة م	<u>ت</u> ما هة
- · · · · · · · ·			_											(-		a) eig
Instrument#		Initial Cal.			l Con	Contin. Cal.			Contin. Cal.			ontin. Ca	1.	Cor	<u> </u>	
Date/Time:		11-	25-9	<u> </u>	11-30-	15/160	2L									i
	! #	τí	%rsd		l rf	1 %d	*	rf		*	rf	<b>1</b> %d	*	rſ	%d	1 *
Chloromethane	[0.01]		1	!	1	<u> </u>	1	L	<u> </u>	L		1				Ti
Bromomethane	0.10	2.199	1/3 0	Ī	10.134	132.7	IJ	<u> </u>				Ĺ				Ī
Vinyl chloride	0.10			1		1	1		1							
Chloroethane	0.01		1	1	1					11		1	1 1			
Methylene chloride	0.01				<u> </u>		L.	<u> </u>								1 1
Acetone	0.01	c.067	144.9	J	10.141	1109.1	1.7	L	1	1_1						1_1
Carbon disulfide	0.01		1		1				1	<u>L 1</u>		1	ΪΙ			
1,1-Dichloroethene	0.10				1	1	1		1	1 1		1				
1,1-Dichloroethane	0.20			1	<u> </u>	1		L	1	1_1		1	1 1			1 1
1,2-Dichloroethene (total)					1		<u> </u>	L		1_1			1_1			I
Chloroform	[0.20]		L	1	L	L.	1					1				
1,2-Dichloroethane	0.10			}		1		L	1			1	1 1			1
2-Butanone	0.01	0.009	18.3	7	10.016	173 3	15	1	1	<u> </u>			1_1			$\mathbf{I}^{-}$
1,1,1-Trichloroethane	0.10				L		L								Ĺ	Ι.
Carbon tetrachloride	0.10		1			1		L		1_1		1				$\Box$
Bromodichloromethane	[0.20]		1			1		<u>.                                    </u>	1			1	1 1			1
1,2-Dichloropropane			<u>L</u>	1		1		1					1 1		L	
cis-1,3-Dichloropropene	0.20		<u> </u>	1	<u> </u>	1			1	1_1		<u> </u>			<u> </u>	
Trichloroethene	[0.30]		<u> </u>	1	<u></u>	1			1			1			L	
Dibromochloromethane					10.975			<u> </u>	1		··-		1 1		Ĺ	1
1,1,2-Trichloroethane			18.3	1_	10.765	124.3	IJ	<u> </u>		$oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}}}}}}}}}}}}}}}}}}$						Т,
Benzene	0.50		<u></u>	1	1	1	1	<u> </u>	1			ل			L	<u></u>
tran-1,3-Dichloropropene	0.10		<u> </u>	<u></u>	<u> </u>	<u> </u>	<u> </u>	<u></u>		1_1					<u> </u>	
Bromoform	0.10	0.318	23.8	17	10.453	142.3	15	1	1	11		ــــــــــــــــــــــــــــــــــــــ	1 1		<u></u>	1
4-Methyl-2-pentanone	0.01	C. 321	142.7	<u>1.J</u>	18.289	10.0	17	<u> </u>	1			<del></del>	1_1		<u> </u>	
2-Hexanone			22.6	15	10.193	149.0	I.T.	1	!	11			1_1		L	
Tetrachloroethene	0.20		<u> </u>	1	<u> </u>		!	L		$\perp$		<u></u>		·	L	1
1,1,2,2-Tetrachloroethane	[0.50]		<u>L</u>	1_	1	1	1	1	1	1		<u> </u>	1 1		<u> </u>	1_1
Toluene	0.40		<u> </u>	<u></u>	<u></u>	<u> </u>	1	<u> </u>		11		ــــــــــــــــــــــــــــــــــــــ			<u></u>	
Chlorobenzene	0.50		L	1	<u> </u>	1	<u> </u>	<u> </u>	1	لــــــــــــــــــــــــــــــــــــــ		<u></u>			L	
Fihylhenzene	10.10!		1	1	1	1	1	1	1	+ 1		1	1 1		ł	1 '

Samples affected:

Xylene (total) or tho -

Bromofluorobenzene 1,2-Dichloroethane-d4

Cis 1,2-aichloroetliene

Styrene

Toluene-d8

10.325 10.375 15.51 17111 A4B 17207 4 × R

Reviewer's Init/Date: 29 4/16/99

0.30

10.20 1.586

10.30 11.556 115.2 J 11.655 6.3 10.334 16.9 15 10.319 15.7

11.823 115.0

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

= These flags should be applied to the analytes on the sample data sheets.

= Minimum Relative Response Factor

## ORGANIC DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature used in this document, the following code letters and associated definitions are provided:

**VALUE** - when/if the result of a value is greater than or equal to the Contract Required Quantitation Limit (CRQL).

- U Indicates that the compound was analyzed for, but not detected. The sample quantitation limit corrected for dilution and percent moisture is reported.
- J Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound where the result is less than the sample quantitation limit, but greater than zero. The flag is also used to indicate a reported result having an associated QC problem.
- R Indicates the data are unusable. (NOTE: The analyte may or may not be present.)
- N Indicates presumptive evidence of a compound. This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search.
- P Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns. The lower of the two results is reported.
- C Indicates pesticide results that have been confirmed by GC/MS.
- B Indicates the analyte is detected in the associated blank as well as in the sample.
- E Indicates compounds whose concentrations exceed the calibration range of the instrument.
- D Indicates an identified compound in an analysis has been diluted. This flag alerts the data user to any differences between the concentrations reported in the two analysis.
- A Indicates tentatively identified compounds that are suspected to be aldol condensation products.
- G Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method.
- L Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method.
- T Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample.
- X,Y,Z are reserved for laboratory defined flags.



AN ENVIRONMENTAL ANALYTICAL LABORATORY

#### **WORK ORDER #: 9811144**

Work Order Summary

CLIENT:

Mr. Steve Peterson

BILL TO: Same

U.S. Army Corps of Engineers 215 N. 17th Street, Zorinsky Bldg.

Omaha, NE 68102-4978

PHONE:

402-221-7183

P.O. # NR

FAX:

402-221-7769

PROJECT # DACW45-99-P-0094 Himco Dump Superfund Site

DATE RECEIVED:

11/10/98

DATE COMPLETED:

11/11/98

DATE REISSUED:

11/24/98 To amend results for all samples.

FRACTION#

NAME

**TEST** VOST 5041A/8260B/TIC's

01A/B 02A/B 03A/B 04A/B 05A 7115A, 7115B 7105A, 7105B 7110A, 7110B

7119A, 7119B Lab Blank VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's

CERTIFIED BY:

Laboratory Director

DATE: 11 25

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

#### LABORATORY NARRATIVE

#### Analysis of Volatile Organic Compounds in VOST Cartridges by EPA 5041A/8260B U.S. Army Corps of Engineers Work Order #9811144

Four Tenax and Tenax/charcoal tube pairs (VOST cartridges) were received on November 10, 1998. The sacrificial temperature check vial was not provided with the shipment, therefore the actual temperature of the shipment was not recorded. The samples were received on ice and therefore their integrity is not in question. The laboratory performed the analysis via EPA SW-846 Method 5041A using GC/MS in the full scan mode. The method involves thermal desorption of the VOST cartridges for 11 min. at 180° C using an inert gas. The gas stream is then bubbled through 5 mL of organic free water and trapped on the sorbent trap of the purge and trap system. The trap is thermally desorbed to elute the components into the GC system for further separation. See the data sheets for the reporting limits for each compound.

Bag dilution was performed on sample 7115A, 7115B for screening purposes. Internal standard recoveries of chlorobenzene-d5 and 1,4-dichlorobenzene-d4 were slightly outside QC limits for sample 7115A, 7115B.

There were no other out of the ordinary circumstances to report.

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
- J Estimated Value.
- E Exceeds instrument calibration range.
- S Saturated Peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- N The identification is based on presumptive evidence.

**SAMPLE NAME: 7115A, 7115B** 

ID#: 9811144-01A/B Modified VOST 5041A

File Name of the state of the state of	-22-64-000	all a water college mate a	Collections 11/0/00
File Haille.	9111008 4 1.2	Date o	r Collection [17:3/36
Dil Factor	2212	Date o	f Analysis-"11/10/98
Distractor.		Date o	, VIIII 1212

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	12	Not Detected
Vinyl Chloride	6.0	Not Detected
Bromomethane	12	Not Detected
Chloroethane	6.0	Not Detected
1,1-Dichloroethene	6.0	Not Detected
Carbon Disulfide	6.0	Not Detected
Acetone	60	Not Detected
Methylene Chloride	6.0	Not Detected
trans-1,2-Dichloroethene	6.0	Not Detected
1,1-Dichloroethane	6.0	Not Detected
Vinyl Acetate	12	Not Detected
2-Butanone (Methyl Ethyl Ketone)	60	Not Detected
Chloroform	6.0	Not Detected
1,1,1-Trichloroethane	6.0	Not Detected
Carbon Tetrachloride	6.0	Not Detected
Benzene	6.0	66
1,2-Dichloroethane	6.0	Not Detected
Trichloroethene	<b>6.0</b>	Not Detected
1,2-Dichloropropane	6.0	Not Detected
Bromodichloromethane	6.0	Not Detected
trans-1,3-Dichloropropene	6.0	Not Detected
4-Methyl-2-pentanone	12	Not Detected
Toluene	6.0	34
cis-1,3-Dichloropropene	6.0	Not Detected
1,1,2-Trichloroethane	6.0	Not Detected
Tetrachloroethene	6.0	Not Detected
2-Hexanone	12	Not Detected
Dibromochloromethane	6.0	Not Detected
Chlorobenzene	6.0	Not Detected
Ethyl Benzene	6.0	5.9
m,p-Xylene	6.0	20
o-Xylene	6.0	6.2
Styrene	6.0	19
Bromoform	6.0	Not Detected
1,1,2,2-Tetrachloroethane	6.0	Not Detected
cis-1,2-Dichloroethene	6.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Tetradecane, 1-iodo-	19218-94-1	72 %	40

**SAMPLE NAME: 7115A, 7115B** 

ID#: 9811144-01A/B

#### Modified VOST 5041A

File Name: 9111008 Date of Collection: 11/9/98 Dil Factor: 12 Date of Analysis: 11/10/98			
Surrogates	% Recovery	Method Limits	
1,2-Dichloroethane-d4	83	69-112	
Toluene-d8	98	72-134	
4-Bromofluorobenzene	114	78-119	
Dibromofluoromethane	98	70-130	
Benzene-d6	118	70-130	

**SAMPLE NAME: 7105A, 7105B** 

ID#: 9811144-02A/B Modified VOST 5041A

File Name	9111005 Date of Collection- 11/9/08
Dil. Factor:	9111005 Date of Collection: 11/9/98 Date of Analysis: 11/10/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	52
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chleroform	5.0	Not Detected
1,1,1-1 richloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	12
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	43
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	5.4
m,p-Xylene	5.0	18
o-Xylene	5.0	6.0
Styrene	5.0	18
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Undecane, 3-methyl-	1002-43-3	Manual ID	26
Nonanal	124-19-6	83 %	28

**SAMPLE NAME: 7105A, 7105B** 

ID#: 9811144-02A/B

		Mod	lified	vosi	504	1A

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	94	69-112
Toluene-d8	116	72-134
4-Bromofluorobenzene	107	78-119
Dibromofluoromethane	101	70-130

**SAMPLE NAME: 7110A, 7110B** 

ID#: 9811144-03A/B Modified VOST 5041A

File Name:	9111006	Pate of Collection: 11/9/98
		Date of Collection:: 11/9/98 Date of Analysis:: 11/10/98
Dil. Factor:	1.0	Date of Analysis: 11/10/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	5.8
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	17
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	6.6
o-Xylene	5.0	Not Detected
Styrene	5.0	9.4
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### **TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

**SAMPLE NAME: 7110A, 7110B** 

ID#: 9811144-03A/B Modified VOST 5041A

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Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	86	69-112
Toluene-d8	111	72-134
4-Bromofluorobenzene	98	78-119
Dibromofluoromethane	96	70-130

**SAMPLE NAME: 7119A, 7119B** 

ID#: 9811144-04A/B Modified VOST 5041A

File Name: 9111007 Date of Collection: 11/9/98  Dil. Factor: 21.0 Date of Analysis: 11/10/98
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

**SAMPLE NAME: 7119A, 7119B** 

### ID#: 9811144-04A/B

#### Modified VOST 5041A

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Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	86	69-112
Toluene-d8	90	72-134
4-Bromofluorobenzene	99	78-119
Dibromofluoromethane	98	70-130

SAMPLE NAME: Lab Blank

ID#: 9811144-05A Modified VOST 5041A

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Dil. Factor:	Date of Analysis: 11/10/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

Container Type: NA

SAMPLE NAME : Lab Blank

#### ID#: 9811144-05A Modified VOST 5041A

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Surrogates	% Recovery	Method Limits		
1,2-Dichloroethane-d4	95	69-112		
Toluene-d8	108	72-134		
4-Bromofluorobenzene	96	78-119		
Dibromofluoromethane	91	70-130		



AN ENVIRONMENTAL ANALYTICAL LABORATORY

180 BLUE RAVINE ROAD, ( ) B FOLSOM, CA 95630-4719 (916) 985-1000 FAX: (916) 985-1020

Nº 017739

Page  $\perp$  of  $\perp$ 

# **CHAIN-OF-CUSTODY RECORD**

Company Address Phone (4		f Engineers	eNE Zip 68102 169	Project Info:  P.O. #  Project #  Project Name Himco Dup  Sperful St	□ Norma	24-HC Speci	
Lab I.D.	Field Sample I.D.	Date & Time	Analy	vses Requested	Caniste Initial	r Pressure /	Vacuum Receipt
UIA/B	7115A, 7115B	11/9/98 1259	VOCs		WIA	NA	
02A/B	705A, 7105B	11/1/98 1230	WG		NA	N/A	
03A/B	7110A, 7110B	11/1/12 1215	V0(5		NA	NA	
OHA/B	7110A, 7110B 7119H, 719B	1/1/8 0700	VOC5		W/H	W/A	
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#### WORK ORDER #: 9811212

Work Order Summary

CLIENT:

Mr. Steve Peterson

BILL TO: Same

U.S. Army Corps of Engineers

215 N. 17th Street, Zorinsky Bldg.

Omaha, NE 68102-4978

PHONE:

402-221-7183

P.O. # NR

FAX:

402-221-7769

PROJECT # Himco Dump Superfund Site

DATE RECEIVED:

11/12/98

DATE COMPLETED: 12/1/98

FRACTION#	NAME
01A/B	7210A,7210B
02A/B*	7208A,7208B
03A/B	7212A,7212B
04A/B	7220A,7220B
05A/B	7204A,7204B
06A/B	7218A,7218B
07A	Lab Blank

**TEST** VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041 A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's

LAB NARRATIVE:

\*Sample not analyzed. See Laboratory Narrative.

CERTIFIED BY:

Laboratory Director

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

#### LABORATORY NARRATIVE

#### Analysis of Volatile Organic Compounds in VOST Cartridges by EPA 5041A/8260B U.S. Army Corps of Engineers Work Order #9811212

Six Tenax and Tenax/charcoal tube pairs (VOST cartridges) were received on November 12, 1998. The sacrificial temperature check vial was not provided with the shipment, therefore the actual temperature of the shipment was not recorded. The samples were received on ice and therefore their integrity is not in question. The laboratory performed the analysis via EPA SW-846 Method 5041A using GC/MS in the full scan mode. The method involves thermal desorption of the VOST cartridges for 11 min. at 180° C using an inert gas. The gas stream is then bubbled through 5 mL of organic free water and trapped on the sorbent trap of the purge and trap system. The trap is thermally desorbed to elute the components into the GC system for further separation. See the data sheets for the reporting limits for each compound.

Bag dilution was performed on sample 7210A,7210B to screen the sample. Sample 7208A,7208B contained a thick black liquid therefore it could not be desorbed and analyzed. For samples 7212A and 7212B, the internal standard recovery of 1,4 DCB-d4 and surrogate recovery of BFB were outside QC limits possibly due to matrix interference. Reanalysis to confirm matrix effect is not possible for VOST tube samples.

There were no other out of the ordinary circumstances to report.

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
- J Estimated Value.
- E Exceeds instrument calibration range.
- S Saturated Peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- N The identification is based on presumptive evidence.

**SAMPLE NAME : 7210A,7210B** 

ID#: 9811212-01A/B Modified VOST 5041A

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File Name: 9111312 Date of Collection: 11/11/98 DIL Factor: 1.1 Date of Analysis: 11/13/98	

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	11	Not Detected
Vinyl Chloride	5.5	6.6
Bromomethane	11	Not Detected
Chloroethane	5.5	24
1,1-Dichloroethene	5.5	Not Detected
Carbon Disulfide	5.5	13
Acetone	55	160
Methylene Chloride	5.5	Not Detected
trans-1,2-Dichloroethene	5.5	17
1,1-Dichloroethane	5.5	2000 E
Vinyl Acetate	11	Not Detected
2-Butanone (Methyl Ethyl Ketone)	55	Not Detected
Chloroform	5.5	63
1,1,1-Trichloroethane	5.5	210
Carbon Tetrachloride	5.5	5.5
Benzene	5.5	40
1,2-Dichloroethane	5.5	Not Detected
Trichloroethene	5.5	150
1,2-Dichloropropane	<b>5.5</b>	Not Detected
Bromodichloromethane	5.5	Not Detected
trans-1,3-Dichloropropene	5.5	7.8
4-Methyl-2-pentanone	11	Not Detected
Toluene	5.5	12
cis-1,3-Dichloropropene	5.5	5.9
1,1,2-Trichloroethane	5.5	Not Detected
Tetrachloroethene	5.5	13000 E
2-Hexanone	11	Not Detected
Dibromochloromethane	5.5	Not Detected
Chlorobenzene	5.5	Not Detected
Ethyl Benzene	5.5	Not Detected
m,p-Xylene	5.5	13
o-Xylene	5.5	Not Detected
Styrene	5.5	29
Bromoform	5.5	Not Detected
1,1,2,2-Tetrachloroethane	5.5 5.5	Not Detected
cis-1,2-Dichloroethene	5.5	Not Detected

#### **TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)	
Methane, trichlorofluoro-	75-69-4	Manual ID	2600	
Ethane, 1,2-dichloro-1,1,2-trifluoro-	354-23-4	91 %	1900	
Ethane, 1,1,2-trichloro-1,2,2-trifluoro-	76-13-1	Manual ID	1200	
Hexanal, 5-methyl-	1860-39-5	Manual ID	63	
Nonanal	124-19-6	83 %	130	
Benzene, 1,2,4-trichloro-	120-82-1	97 %	67	

**SAMPLE NAME: 7210A,7210B** 

ID#: 9811212-01A/B Modified VOST 5041A

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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported Compound **CAS Number Match Quality** Amount (nG) Unknown 130 NA NA 35 Decanal 112-31-2 Manual ID Decane, 5-propyl-42 17312-62-8 80 %

E = Exceeds instrument calibration range.

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	95	69-112
Toluene-d8	116	72-134
4-Bromofluorobenzene	116	78-119
Dibromofluoromethane	92	70-130
Benzene-d6	82	70-130

**SAMPLE NAME : 7212A,7212B** 

ID#: 9811212-03A/B Modified VOST 5041A

File Name: 9111308 Date of Collection: 11/1 DIL Factor: 1.0 Date of Analysis: Ft/13/	1/98
DIL Factor: Surface of Attalysis: FU (4)	10

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	5.1
Acetone	50	110
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	11
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	47
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### **TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

Compound	CAS Number	Match Quality	Amount (nG)
Methane, trichlorofluoro-	75-69-4	90 %	35
Heptanal	111-71-7	Manual ID	28
Nonanal	124-19-6	83 %	190
Decanal	112-31-2	90 %	73
1,1-Dodecanediol, diacetate	56438-07-4	91 %	31
Octacosane	630-02-4	86 %	140

**SAMPLE NAME: 7212A,7212B** 

ID#: 9811212-03A/B Modified VOST 5041A

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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound CAS Number Match Quality Amount (n			
Pentadecane	629-62-9	97 %	76
2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,	719-22-2	98 %	32

Q = Exceeds Quality Control limits, possibly due to matrix effects.

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	87	69-112
Toluene-d8	114	72-134
4-Bromofluorobenzene	211 Q	78-119
Dibromofluoromethane	101	70-130

**SAMPLE NAME: 7220A,7220B** 

ID#: 9811212-04A/B Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	<b>51</b> ,
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	26
1,1,1-Trichloroethane	5.0	9.3
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	8.7
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, trichlorofluoro-	75-69-4	90 %	30
cis-1-Butyl-2-methylcyclopropane	38851-69-3	91 %	50
Heptanal	111-71-7	Manual ID	46
3-Heptanone, 5-methyl-	541-85-5	72 %	77
Cyclopropane, pentyl-	2511-91-3	78 %	130
Nonanal	124-19-6	83 %	130

**SAMPLE NAME: 7220A,7220B** 

ID#: 9811212-04A/B Modified VOST 5041A

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TENTATIVE	NTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported		ed
Compound	CAS Number Match Quality Amo		Amount (nG)
Cyclooctane, 1,4-dimethyl-, trans-	13151-98-9	Manual ID	31
Decanal	112-31-2	Manual ID	90
Tetradecane	629-59-4	97 %	64
Octacosane	630-02-4	86 %	49

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	87	69-112
Toluene-d8	105	72-134
4-Bromofluorobenzene	94	78-119
Dibromofluoromethane	95	70-130

**SAMPLE NAME: 7204A,7204B** 

ID#: 9811212-05A/B Modified VOST 5041A

File Name: 9111310 Date of Collect Dif. Factor: Date of Analysis	tion: 11/11/98
Dil. Factor: Date of Analy	sis: 11/13/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Nc⁴ Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
1,2,4-Trioxolane, 3,5-diphenyl-	23888-15-5	Manual ID	28
1-Octanol	111-87-5	80 %	33
Ethanone, 1-phenyl-	98-86-2	94 %	43
1-Decene, 2,4-dimethyl-	55170-80-4	Manual ID	51
Unknown	NA	NA	25
Tetradecane	629-59-4	94 %	31

**SAMPLE NAME: 7204A,7204B** 

ID#: 9811212-05A/B Modified VOST 5041A

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**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported** 

Compound	CAS Number	Match Quality	Amount (nG)
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Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	89	69-112
Toluene-d8	108	72-134
4-Bromofluorobenzene	101	78-119
Dibromofluoromethane	97	70-130

**SAMPLE NAME: 7218A,7218B** 

ID#: 9811212-06A/B Modified VOST 5041A

	File Name: 9111311 Date of Collection: 11/11/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Analysis: 11/13/98 Difference of Anal
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	55
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	13
1,1,1-Trichloroethane	5.0	12
Carbon Tetrachloride	5.0	5.0
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	500
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### **TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

Compound	CAS Number	Match Quality	Amount (nG)
Methane, trichlorofluoro-	75-69-4	90 %	890
Nonanal	124-19-6	83 %	180
Decanal	112-31-2	Manual ID	68
1,1-Dodecanediol, diacetate	56438-07-4	91 %	26
Tetradecane	629-59-4	96 %	34

ID#: 9811212-06A/B

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Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	91	69-112
Toluene-d8	- 84	72-134
4-Bromofluorobenzene	98	78-119
Dibromofluoromethane	98	70-130

SAMPLE NAME: Lab Blank

ID#: 9811212-07A

#### **Modified VOST 5041A**

File Name:	911130	Date of Collection: NA Date of Analysis: 11/13/98
DII. Factor.	<b>第二个学习的主义</b>	Date Of Atlanysis Part 1930 cases

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	_ 5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)
None Identified

None Identified

Container Type: NA

SAMPLE NAME : Lab Blank

#### ID#: 9811212-07A Modified VOST 5041A

File Name	The indicated and the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the 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Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	103	69-112
Toluene-d8	100	72-134
4-Bromofluorobenzene	96	78-119
Dibromofluoromethane	97	70-130

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA 95630-4719 (916) 985-1000 FAX: (916) 985-1020

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

#### WORK ORDER #: 9811253

Work Order Summary

**CLIENT:** 

Mr. Steve Peterson

BILL TO: Same

U.S. Army Corps of Engineers

215 N. 17th Street, Zorinsky Bldg.

Omaha, NE 68102-4978

PHONE:

402-221-7183

P.O. # NR

FAX:

402-221-7769

PROJECT # DACW45-99-P-0094 Himco Dump

DATE RECEIVED:

11/13/98

DATE COMPLETED:

12/2/98

FRACTION#	NAME
01A/B	7101A&B
02A/B	7125A&B
03A/B	7211A&B
04A/B	7121A&B
05A/B	7112A&B
06A	Lab Blank
06B	Lab Blank

**TEST** 

VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's

CERTIFIED BY:

Laboratory Director

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

# LABORATORY NARRATIVE Analysis of Volatile Organic Compounds in VOST Cartridges by EPA 5041A/8260B

#### U.S. Army Corps of Engineers Work Order #9811253

Five Tenax and Tenax/charcoal tube pairs (VOST cartridges) were received on November 13, 1998. The sacrificial temperature check vial was not provided with the shipment, therefore the actual temperature of the shipment was not recorded. The samples were received on ice and therefore their integrity is not in question. The laboratory performed the analysis via EPA SW-846 Method 5041A using GC/MS in the full scan mode. The method involves thermal desorption of the VOST cartridges for 11 min. at 180° C using an inert gas. The gas stream is then bubbled through 5 mL of organic free water and trapped on the sorbent trap of the purge and trap system. The trap is thermally desorbed to elute the components into the GC system for further separation. See the data sheets for the reporting limits for each compound.

Bag dilutions were performed on all the samples due to uncertainty of analyte concentrations.

Sample 7121A&B is reported for less compounds than the required target list due to a system malfunction aborting the sample run after only 16 minutes.

The daily calibration check analyzed on November 22,1998 was slightly out of the CCC criteria for 1,1-dichloroethene; analysis proceeded since bag dilution hold times were approaching expiration. A new ICAL was performed before any further sample analysis.

There were no other out of the ordinary circumstances to report.

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
- J Estimated Value.
- E Exceeds instrument calibration range.
- S Saturated Peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- N The identification is based on presumptive evidence.

SAMPLE NAME : 7101A&B ID#: 9811253-01A/B Modified VOST 5041A

File Name: Dil. Factor:	

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	17	Not Detected
Vinyl Chloride	8.5	Not Detected
Bromomethane	17	Not Detected
Chloroethane	8.5	Not Detected
1,1-Dichloroethene	8.5	Not Detected
Carbon Disulfide	8.5	16
Acetone	85	Not Detected
Methylene Chloride	8.5	Not Detected
trans-1,2-Dichloroethene	8.5	Not Detected
1,1-Dichloroethane	8.5	Not Detected
Vinyl Acetate	17	Not Detected
2-Butanone (Methyl Ethyl Ketone)	85	Not Detected
Chloroform	8.5	Not Detected
1,1,1-Trichloroethane	8.5	Not Detected
Carbon Tetrachloride	8.5	Not Detected
Benzene	8.5	43
1,2-Dichloroethane	8.5	Not Detected
Trichloroethene	<b>8.5</b> ,	Not Detected
1,2-Dichloropropane	8.5	Not Detected
Bromodichloromethane	8.5	Not Detected
trans-1,3-Dichloropropene	8.5	Not Detected
4-Methyl-2-pentanone	17	Not Detected
Toluene	8.5	Not Detected
cis-1,3-Dichloropropene	8.5	Not Detected
1,1,2-Trichloroethane	8.5	Not Detected
Tetrachloroethene	8.5	Not Detected
2-Hexanone	17	Not Detected
Dibromochloromethane	8.5	Not Detected
Chlorobenzene	8.5	Not Detected
Ethyl Benzene	8.5	Not Detected
m,p-Xylene	8.5	Not Detected
o-Xylene	8.5	Not Detected
Styrene	8.5	Not Detected
Bromoform	8.5	Not Detected
1,1,2,2-Tetrachloroethane	8.5	Not Detected
cis-1,2-Dichloroethene	8.5	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

SAMPLE NAME: 7101A&B

#### ID#: 9811253-01A/B

#### Modified VOST 5041A

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Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	99	69-112
Toluene-d8	96	72-134
4-Bromofluorobenzene	94	78-119
Dibromofluoromethane	97	70-130
Benzene-d6	82	70-130

SAMPLE NAME: 7125A&B

ID#: 9811253-02A/B Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	3300	Not Detected
Vinyl Chloride	1700	390000 E
Bromomethane	3300	Not Detected
Chloroethane	1700	Not Detected
1,1-Dichloroethene	1700	2900
Carbon Disulfide	1700	60000
Acetone	17000	Not Detected
Methylene Chloride	1700	17000
trans-1,2-Dichloroethene	1700	Not Detected
1,1-Dichloroethane	1700	Not Detected
Vinyl Acetate	3300	Not Detected
2-Butanone (Methyl Ethyl Ketone)	17000	Not Detected
Chloroform	1700	Not Detected
1,1,1-Trichloroethane	1700	Not Detected
Carbon Tetrachloride	1700	Not Detected
Benzene	1700	Not Detected
1,2-Dichloroethane	1700	Not Detected
Trichloroethene	1700	Not Detected
1,2-Dichloropropane	1700	Not Detected
Bromodichloromethane	1700	Not Detected
trans-1,3-Dichloropropene	1700	Not Detected
4-Methyl-2-pentanone	3300	Not Detected
Toluene	1700	Not Detected
cis-1,3-Dichloropropene	1700	Not Detected
1,1,2-Trichloroethane	1700	Not Detected
Tetrachloroethene	1700	Not Detected
2-Hexanone	3300	Not Detected
Dibromochloromethane	1700	Not Detected
Chlorobenzene	1700	Not Detected
Ethyl Benzene	1700	3200
m,p-Xylene	. 1700	2000
o-Xylene	1700	Not Detected
Styrene	1700	Not Detected
Bromoform	1700	Not Detected
1,1,2,2-Tetrachloroethane	1700	Not Detected
cis-1,2-Dichloroethene	1700	12000

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	90 %	1000000
Methane, dichlorofluoro-	75-43-4	70 %	65000
Disulfide, dimethyl	624-92-0	95 %	120000
1-Hexanol, 2-ethyl-	104-76-7	Manual ID	12000
Undecane	1120-21-4	90 %	9600
Decanedioic acid, didecyl ester	2432-89-5	Manual ID	14000

SAMPLE NAME: 7125A&B

ID#: 9811253-02A/B Modified VOST 5041A

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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Decane, 2,5,6-trimethyl-	62108-23-0	Manual ID	25000
Unknown	NA	NA	18000
Nonane, 2,6-dimethyl-	17302-28-2	Manual ID	14000

E = Exceeds instrument calibration range.

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	96	69-112
Toluene-d8	96	72-134
4-Bromofluorobenzene	93	78-119
Dibromofluoromethane	96	70-130

SAMPLE NAME: 7211A&B

ID#: 9811253-03A/B Modified VOST 5041A

File Name: 9112118 Date of Collection: 1/122	98 °
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	1300	Not Detected
Vinyl Chloride	650	3800
Bromomethane	1300	Not Detected
Chloroethane	650	Not Detected
1,1-Dichloroethene	650	1500
Carbon Disulfide	650	20000
Acetone	6500	Not Detected
Methylene Chloride	650	Not Detected
trans-1,2-Dichloroethene	650	Not Detected
1,1-Dichloroethane	650	Not Detected
Vinyl Acetate	1300	Not Detected
2-Butanone (Methyl Ethyl Ketone)	6500	Not Detected
Chloroform	650	Not Detected
1,1,1-Trichloroethane	650	Not Detected
Carbon Tetrachloride	650	Not Detected
Benzene	650	4300
1,2-Dichloroethane	650	Not Detected
Trichloroethene	650	7400
1,2-Dichloropropane	650 <sup>′</sup>	Not Detected
Bromodichloromethane	650	Not Detected
trans-1,3-Dichloropropene	650	Not Detected
4-Methyl-2-pentanone	1300	Not Detected
Toluene	650	5200
cis-1,3-Dichloropropene	650	Not Detected
1,1,2-Trichloroethane	650	Not Detected
Tetrachloroethene	650	10000
2-Hexanone	1300	Not Detected
Dibromochloromethane	650	Not Detected
Chlorobenzene	650	1100
Ethyl Benzene	650	69000
m,p-Xylene	650	37000
o-Xylene	650	13000
Styrene	650	Not Detected
Bromoform	650	Not Detected
1,1,2,2-Tetrachloroethane	650	Not Detected
cis-1,2-Dichloroethene	650	1400

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	Manual ID	33000
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	72 %	200000
Heptane, 2-methyl-	592-27-8	83 %	29000
Hexane, 3-ethyl-	619-99-8	72 %	35000
Octane	111-65-9	90 %	29000
Cyclopentane, 1-ethyl-3-methyl-	3726-47-4	Manual ID	40000



SAMPLE NAME: 7211A&B

ID#: 9811253-03A/B Modified VOST 5041A

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TENTAT	IVELY IDENTIFIED COMPOU	LY IDENTIFIED COMPOUNDS - Top 10 Reported	
Compound	CAS Number	Match Quality	Amount (nG)
Octane, 2,5,6-trimethyl-	62016-14-2	Manual ID	76000
Benzene, 1-ethyl-2-methyl-	611-14-3	94 %	24000
Decane	124-18-5	87 %	39000
Decane, 2,6,7-trimethyl-	62108-25-2	Manual ID	27000

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	92	69-112
Toluene-d8	97	72-134
4-Bromofluorobenzene	103	78-119
Dibromofluoromethane	96	70-130
Benzene-d6	89	70-130

SAMPLE NAME : 7121A&B ID#: 9811253-04A/B Modified VOST 5041A

File Name: 9112120 9112120 9112120	Date of Collection: 11/12/98
Dil. Factor: 34	Date of Analysis: 11/21/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	340	Not Detected
Vinyl Chloride	170	430
Bromomethane	340	Not Detected
Chloroethane	170	Not Detected
1,1-Dichloroethene	170	Not Detected
Carbon Disulfide	170	400
Acetone	1700	Not Detected
Methylene Chloride	170	Not Detected
trans-1,2-Dichloroethene	170	Not Detected
1,1-Dichloroethane	170	1200
Vinyl Acetate	340	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1700	Not Detected
Chloroform	170	Not Detected
1,1,1-Trichloroethane	170	850
Carbon Tetrachloride	170	Not Detected
Benzene	170	790
1,2-Dichloroethane	170	Not Detected
Trichloroethene	170	200
1,2-Dichloropropane	170	290
Bromodichloromethane	170	Not Detected
trans-1,3-Dichloropropene	170	Not Detected
4-Methyl-2-pentanone	340	Not Detected
Toluene	170	740
cis-1,3-Dichloropropene	170	Not Detected
cis-1,2-Dichloroethene	170	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	91 %	180000
Methane, trichlorofluoro-	75-69-4	83 %	650
Unknown	· NA	NA	2800

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	91	69-112
Toluene-d8	98	72-134
Dibromofluoromethane	100	70-130
Benzene-d6	76	70-130



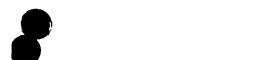
SAMPLE NAME: 7112A&B

ID#: 9811253-05A/B Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	20	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	20	Not Detected
Chloroethane	10	Not Detected
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	59
Acetone	100	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	20	Not Detected
2-Butanone (Methyl Ethyl Ketone)	100	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	44
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	20	Not Detected
Toluene	10	19
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	20	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	23
m,p-Xylene	. 10	30
o-Xylene	10	11
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
Propane, 2-methyl-	75-28-5	Manual ID	310
Butane	106-97-8	Manual ID	350
Butane, 2-methyl-	78-78-4	Manual ID	67
Pentane	109-66-0	Manual ID	65
.alphaPinene	80-56-8	96 %	53
Unknown	NA	NA	85



SAMPLE NAME: 7112A&B

ID#: 9811253-05A/B **Modified VOST 5041A** 

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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported CAS Number Match Quality Amount (nG) Compound

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	93	69-112
Toluene-d8	100	72-134
4-Bromofluorobenzene	98	78-119
Dibromofluoromethane	104	70-130
Benzene-d6	76	70-130

SAMPLE NAME : Lab Blank ID#: 9811253-06A

Modified VOST 5041A

File Name	ses 9112117. Suit Spales / S Suit sector to the Suit Suit	Date of Collection: NA
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	. 10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

Container Type: NA

SAMPLE NAME : Lab Blank

#### ID#: 9811253-06A

#### Modified VOST 5041A

Surrogates	% Recovery	Method Limits		
1,2-Dichloroethane-d4	104	69-112		
Toluene-d8	94	72-134		
4-Bromofluorobenzene	94	78-119		
Dibromofluoromethane	99	70-130		

SAMPLE NAME: Lab Blank

ID#: 9811253-06B Modified VOST 5041A

File Name: 9112204 Date of Collection: N/ Dit. Factor: Date of Analysis: 11/	
Dit Factor: Date of Analysis: 177	22/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

Container Type: NA



SAMPLE NAME : Lab Blank

ID#: 9811253-06B

#### Modified VOST 5041A

File Name: 1997 1997 2004 2004 2004 2004 2004 2004 2004 200	

Surrogates	% Recovery	Method Limits	
1,2-Dichloroethane-d4	100	69-112	
Toluene-d8	95	72-134	
4-Bromofluorobenzene	93	78-119	
Dibromofluoromethane	115	70-130	

# AIR TOXICS LTD. AN ENVIRONMENTAL ANALYTICAL LABORATORY CHAIN-C

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA 95630-4719 (916) 985-1000 FAX: (916) 985-1020

Nº 017740

Page (\_ of \_

# CHAIN-OF-CUSTODY RECORD

Contact Person Richard Gro Company US Army Corps of Address 215 N. 17 15 St. (Phone (402) 221-7784 Collected By: Signature		eNE zip 68102 7769	Project Info:  P.O. #NR_  Project # DACWYS-97-P-0094  Project Name time Dump  Superfund Site	Turn Aro		ly
Lab I.D. Field Sample I.D.	Date & Time	Analy	ses Requested	Canistei Initial	Pressure / Final	Vacuum Receipt
01A/B 7217 AFB	11/13/98 0700	DOST 5041A	18260 B/TICS	NA	N/A	
DA/B 7102 A & B	11/13/98 0934	1	1826081 Tics	WA	NA	
03NB 7206 AÉB	11/13/98 0953	1	1/8260 B/TICS	N/A	NA	
04/A/B 7209 A&B	11/13/98 1106		4/8260 B/71CS	N/H	N/A	
OSA/B 7107 A & B	11/13/98 1214		4/8260B/TICS	NA	NA	
Oba/B 7120 A & B	11/13/98 1234	1	4/8260B/ TICS	WA	WA	
07A/B 7219 AFB	1/13/98 1309	1	4/82608/TIGS	NIA	N/A	
08AB 7124 AÉB	11/13/98 1416		1A/8260B/TICS	WIA	N/A	
		4.				
Relinquished By (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By:						
Shipper Name Air E Lab FLO-LX SUCIARY Only	·····	y: Date/Time Te	amp. (°C) Condition Custody Sea		9811	

#### WORK ORDER #: 9811263

Work Order Summary

**CLIENT:** 

Mr. Steve Peterson

BILL TO: Same

U.S. Army Corps of Engineers

215 N. 17th Street, Zorinsky Bldg.

Omaha, NE 68102-4978

PHONE:

402-221-7183

**P.O.** # NR

FAX:

402-221-7769

PROJECT # DACW45-99-P-0094 Himco Dump

DATE RECEIVED:

11/14/98

DATE COMPLETED: 12/4/98

FRACTION#	NAME	TEST
01A/B	7217A&B	VOST 5041A/8260B/TIC's
02A/B	7102A&B	VOST 5041A/8260B/TIC's
03A/B	7206A&B	VOST 5041A/8260B/TIC's
04A/B	7209A&B	VOST 5041A/8260B/TIC's
05A/B	7107A&B	VOST 5041A/8260B/TIC's
06A/B	7120A&B	VOST 5041A/8260B/TIC's
07A/B	7219A&B	VOST 5041A/8260B/TIC's
08A/B	7124A&B	VOST 5041A/8260B/TIC's
09A	Lab Blank	VOST 5041A/8260B/TIC's
09B	Lab Blank	VOST 5041A/8260B/TIC's

CERTIFIED BY:

Laboratory Director

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

#### LABORATORY NARRATIVE

#### Analysis of Volatile Organic Compounds in VOST Cartridges by EPA 5041A/8260B U.S. Army Corps of Engineers Work Order #9811263

Eight Tenax and Tenax/charcoal tube pairs (VOST cartridges) were received on November 14, 1998. The sacrificial temperature check vial was not provided with the shipment, therefore the actual temperature of the shipment was not recorded. The samples were received on ice and therefore their integrity is not in question. The laboratory performed the analysis via EPA SW-846 Method 5041A using GC/MS in the full scan mode. The method involves thermal desorption of the VOST cartridges for 11 min. at 180° C using an inert gas. The gas stream is then bubbled through 5 mL of organic free water and trapped on the sorbent trap of the purge and trap system. The trap is thermally desorbed to elute the components into the GC system for further separation. See the data sheets for the reporting limits for each compound.

Samples 7217A&B and 7102A&B were analyzed directly as tube samples. Sample 7102A&B was heavily loaded with target analytes as well as nontarget analytes. Data is "E" and "S" flagged. Bag dilutions were performed on other six samples.

There were no other out of the ordinary circumstances to report.

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
- J Estimated Value.
- E Exceeds instrument calibration range.
- S Saturated Peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- N The identification is based on presumptive evidence.

# AIR TOXICS LTD. SAMPLE NAME: 7217A&B

ID#: 9811263-01A/B Modified VOST 5041A

File Name: 500 Dil. Factor: 400 Dil.	9111706 :	of Collection: 11/13/98
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	. 5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

SAMPLE NAME: 7217A&B

ID#: 9811263-01A/B Modified VOST 5041A

Surrogates	% Recovery	Method Limits		
1,2-Dichloroethane-d4	89	69-112		
Toluene-d8	_ 112	72-134		
4-Bromofluorobenzene	94	78-119		
Dibromofluoromethane	99	70-130		

SAMPLE NAME: 7102A&B

ID#: 9811263-02A/B

Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	1700 E
Bromomethane	10	22
Chloroethane	5.0	790
1,1-Dichloroethene	5.0	150
Carbon Disulfide	5.0	1900 E
Acetone	50	Not Detected
Methylene Chloride	5.0	150
trans-1,2-Dichloroethene	5.0	260
1,1-Dichloroethane	5.0	11000 S
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	5400 E
Carbon Tetrachloride	5.0	880
Benzene	5.0	4000 E
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	5900 E
1,2-Dichloropropane	5.0	540
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	2100 E
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	5000 E
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	240
Ethyl Benzene	5.0	9200 E
m,p-Xylene	5.0	16000 S
o-Xylene	5.0	8600 S
Styrene	5.0	280
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	5300 E

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	Manual ID	11000
Methane, trichlorofluoro-	75-69-4	83 %	16000
Ethyl ether	60-29-7	86 %	6400
Cyclopentane, methyl-	<del>96-</del> 37-7	78 %	430
Unknown	NA	NA	900
Heptane	142-82-5	78 %	830



SAMPLE NAME: 7102A&B

ID#: 9811263-02A/B Modified VOST 5041A

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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number Match Quality Amount (		
Cyclohexane, ethyl-	1678-91-7	86 %	270
.alphaPinene	80-56-8	94 %	1100
Benzene, 1,3,5-trimethyl-	108-67-8	94 %	260
Benzene, 1,3-dichloro-	541-73-1	98 %	250

E = Exceeds instrument calibration range.

Q = Exceeds Quality Control limits.

S = Saturated peak; data reported as estimated.

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	100	69-112
Toluene-d8	130	72-134
4-Bromofluorobenzene	186 Q	78-119
Dibromofluoromethane	93	70-130

SAMPLE NAME : 7206A&B ID#: 9811263-03A/B

Modified VOST 5041A

File Name:	9111810 4 4 5 Date of Collection: 11/13/9	8
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	1400	Not Detected
Vinyl Chloride	700	2300
Bromomethane	1400	Not Detected
Chloroethane	700	Not Detected
1,1-Dichloroethene	700	Not Detected
Carbon Disulfide	700	2900
Acetone	7000	Not Detected
Methylene Chloride	700	Not Detected
trans-1,2-Dichloroethene	700	Not Detected
1,1-Dichloroethane	700	52000
Vinyl Acetate	1400	Not Detected
2-Butanone (Methyl Ethyl Ketone)	7000	Not Detected
Chloroform	700	Not Detected
1,1,1-Trichloroethane	700	6600
Carbon Tetrachloride	700	Not Detected
Benzene	700	4300
1,2-Dichloroethane	700	Not Detected
Trichloroethene	700	5900
1,2-Dichloropropane	700	Not Detected
Bromodichloromethane	700	Not Detected
trans-1,3-Dichloropropene	700	Not Detected
4-Methyl-2-pentanone	1400	Not Detected
Toluene	700	2000
cis-1,3-Dichloropropene	700	Not Detected
1,1,2-Trichloroethane	700	Not Detected
Tetrachloroethene	700	5600
2-Hexanone	1400	Not Detected
Dibromochloromethane	700	Not Detected
Chlorobenzene	700	Not Detected
Ethyl Benzene	700	7500
m,p-Xylene	700	8700
o-Xylene	700	7000
Styrene	700	Not Detected
Bromoform	700	Not Detected
1,1,2,2-Tetrachloroethane	700	Not Detected
cis-1,2-Dichloroethene	700	5400

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	91 %	51000
Methane, trichlorofluoro-	75-69-4	72 %	420000
Benzene, 1,3,5-trimethyl-	108-67-8	91 %	3600
Benzene, 1,2,3-trimethyl-	526-73-8	91 %	4300

SAMPLE NAME: 7206A&B

ID#: 9811263-03A/B Modified VOST 5041A

File Name: 9111810.75	

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	83	69-112
Toluene-d8	119	72-134
4-Bromofluorobenzene	102	78-119
Dibromofluoromethane	96	70-130
Benzene-d6	76	70-130

SAMPLE NAME: 7209A&B

ID#: 9811263-04A/B Modified VOST 5041A

File Name: 9111812 Date of Collection: T/H3/98
------------------------------------------------

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	1400	Not Detected
Vinyl Chloride	700	Not Detected
Bromomethane	1400	Not Detected
Chloroethane	700	4200
1,1-Dichloroethene	700	Not Detected
Carbon Disulfide	700	Not Detected
Acetone	7000	Not Detected
Methylene Chloride	700	Not Detected
trans-1,2-Dichloroethene	700	Not Detected
1,1-Dichloroethane	700	10000
Vinyl Acetate	1400	Not Detected
2-Butanone (Methyl Ethyl Ketone)	7000	Not Detected
Chloroform	700	Not Detected
1,1,1-Trichloroethane	700 ્	Not Detected
Carbon Tetrachloride	700	Not Detected
Benzene	700	9900
1,2-Dichloroethane	700	Not Detected
Trichloroethene	700	Not Detected
1,2-Dichloropropane	700	Not Detected
Bromodichloromethane	700	Not Detected
trans-1,3-Dichloropropene	700	Not Detected
4-Methyl-2-pentanone	1400	Not Detected
Toluene	700	4800
cis-1,3-Dichloropropene	700	Not Detected
1,1,2-Trichloroethane	700	Not Detected
Tetrachloroethene	700	Not Detected
2-Hexanone	1400	Not Detected
Dibromochloromethane	700	Not Detected
Chlorobenzene	700	Not Detected
Ethyl Benzene	700	65000
m,p-Xylene	700	150000
o-Xylene	700	4700
Styrene	700	Not Detected
Bromoform	700	Not Detected
1,1,2,2-Tetrachloroethane	700	Not Detected
cis-1,2-Dichloroethene	700	Not Detected

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	91 %	28000
Cyclopentane, methyl-	96-37-7	91 %	38000
Cyclopentane, 1,2-dimethyl-, cis-	1192-18-3	87 %	83000
Heptane	142-82-5	Manual ID	92000
Cyclopentane, 1,2,3-trimethyl-, (1.alpha	15890-40-1	93 %	32000
Heptane, 2-methyl-	592-27-8	Manual 1D	31000

SAMPLE NAME: 7209A&B

ID#: 9811263-04A/B Modified VOST 5041A

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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
Cyclohexane, 1,3-dimethyl-, trans-	2207-03-6	90 %	27000
Benzene, 1-ethyl-2-methyl-	611-14-3	Manual ID	29000
Benzene, 1-ethyl-4-methyl-	622-96-8	94 %	30000
Benzene, 1,3,5-trimethyl-	108-67-8	94 %	79000

Q = Exceeds Quality Control limits.
Container Type: VOST Tube

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	87	69-112
Toluene-d8	129	72-134
4-Bromofluorobenzene	163 Q	78-119
Dibromofluoromethane	96	70-130
Benzene-d6	108	70-130

SAMPLE NAME : 7107A&B ID#: 9811263-05A/B

Modified VOST 5041A

File Name:	9111813 Date of Collection: 11/13/98 Date of Analysis 11/18/98 See
Dil. Factor:	#25-12- *** Date of Analysis: 11/18/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	12	Not Detected
Vinyl Chloride	6.0	Not Detected
Bromomethane	12	Not Detected
Chloroethane	6.0	Not Detected
1,1-Dichloroethene	6.0	Not Detected
Carbon Disulfide	6.0	Not Detected
Acetone	60	79
Methylene Chloride	6.0	29
trans-1,2-Dichloroethene	6.0	Not Detected
1,1-Dichloroethane	6.0	Not Detected
Vinyl Acetate	12	Not Detected
2-Butanone (Methyl Ethyl Ketone)	60	Not Detected
Chloroform	6.0	Not Detected
1,1,1-Trichloroethane	6.0	Not Detected
Carbon Tetrachloride	6.0	9.2
Benzene	6.0	51
1,2-Dichloroethane	6.0	Not Detected
Trichloroethene	6.0	Not Detected
1,2-Dichloropropane	6.0	Not Detected
Bromodichloromethane	6.0	Not Detected
trans-1,3-Dichloropropene	6.0	Not Detected
4-Methyl-2-pentanone	12	Not Detected
Toluene	6.0	64
cis-1,3-Dichloropropene	6.0	Not Detected
1,1,2-Trichloroethane	6.0	Not Detected
Tetrachloroethene	6.0	15
2-Hexanone	12	Not Detected
Dibromochloromethane	6.0	Not Detected
Chlorobenzene	6.0	Not Detected
Ethyl Benzene	6.0	18
m,p-Xylene	6.0	35
o-Xylene	6.0	10
Styrene	6.0	26
Bromoform	6.0	Not Detected
1,1,2,2-Tetrachloroethane	6.0	Not Detected
cis-1,2-Dichloroethene	6.0	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
Unknown	NA	NA	210
Unknown	NA	NA	73
Benzene, 1-ethyl-4-methyl-	622-96-8	94 %	35
Cyclohexene, 4-methyl-1-(1-methylethyl)-	500-00-5	76 %	29
Decane	124-18-5	92 %	32
Benzene, 1,3,5-trimethyl-	108-67-8	94 %	110

# AIR TOXICS LTD. SAMPLE NAME: 7107A&B

ID#: 9811263-05A/B Modified VOST 5041A

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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Benzene, 2-ethyl-1,3-dimethyl-	2870-04-4	94 %	36
Benzene, methyl(1-methylethyl)-	25155-15-1	91 %	33

Q = Exceeds Quality Control limits.
Container Type: VOST Tube

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	93	69-112
Toluene-d8	112	72-134
4-Bromofluorobenzene	102	78-119
Dibromofluoromethane	98	70-130
Benzene-d6	69 Q	70-130



SAMPLE NAME: 7120A&B

ID#: 9811263-06A/B Modified VOST 5041A

File Name		Date	of Collections 11/12/09
File Name:		The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	or conection.
Dil_Factor	- 1.2 · i	Date	of Analysis: 11/18/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	12	Not Detected
Viny! Chloride	6.0	34
Bromomethane	12	Not Detected
Chloroethane	6.0	Not Detected
1,1-Dichloroethene	6.0	6.9
Carbon Disulfide	6.0	55
Acetone	60	230
Methylene Chloride	6.0	Not Detected
trans-1,2-Dichloroethene	6.0	Not Detected
1,1-Dichloroethane	6.0	Not Detected
Vinyl Acetate	12	Not Detected
2-Butanone (Methyl Ethyl Ketone)	60	76
Chloroform	6.0	Not Detected
1,1,1-Trichloroethane	6.0	91
Carbon Tetrachloride	6.0	Not Detected
Benzene	6.0	46
1,2-Dichloroethane	6.0	Not Detected
Trichloroethene	6.0	Not Detected
1,2-Dichloropropane	6.0	Not Detected
Bromodichloromethane	6.0	Not Detected
trans-1,3-Dichloropropene	6.0	Not Detected
4-Methyl-2-pentanone	12	Not Detected
Toluene	6.0	10
cis-1,3-Dichloropropene	6.0	Not Detected
1,1,2-Trichloroethane	6.0	Not Detected
Tetrachloroethene	6.0	12
2-Hexanone	12	Not Detected
Dibromochloromethane	6.0	Not Detected
Chiorobenzene	6.0	Not Detected
Ethyl Benzene	6.0	Not Detected
m,p-Xylene	. 6.0	Not Detected
o-Xylene	6.0	Not Detected
Styrene	6.0	Not Detected
Bromoform	6.0	Not Detected
1,1,2,2-Tetrachloroethane	6.0	Not Detected
cis-1,2-Dichloroethene	6.0	Not Detected

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	91 %	980
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	86 %	3200
Unknown	NA	NA	160
Unknown	NA	NA	46
Methane, trichlorofluoro-	75-69 <del>-</del> 4	90 %	80
cis-1-Butyl-2-methylcyclopropane	38851-69-3	94 %	180

SAMPLE NAME: 7120A&B

ID#: 9811263-06A/B

Modified	<b>VOST 5041A</b>
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File Name:	9111814	Date of Collection:	1/13/98 1/18/98

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
.alphaPinene	80-56-8	95 %	470
Camphene	79-92-5	94 %	210
.betaPinene	127-91-3	91 %	140
.betaMyrcene	123-35-3	Manual ID	59
Nonanal	124-19-6	78 %	61

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	97	69-112
Toluene-d8	104	72-134
4-Bromofluorobenzene	116	78-119
Dibromofluoromethane	101	70-130
Benzene-d6	92	70-130



SAMPLE NAME: 7219A&B

ID#: 9811263-07A/B

Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	11	Not Detected
Vinyl Chloride	5.5	Not Detected
Bromomethane	11	Not Detected
Chloroethane	5.5	Not Detected
1,1-Dichloroethene	5.5	Not Detected
Carbon Disulfide	5.5	Not Detected
Acetone	55	Not Detected
Methylene Chloride	5.5	Not Detected
trans-1,2-Dichloroethene	5.5	Not Detected
1,1-Dichloroethane	5.5	Not Detected
Vinyl Acetate	11	Not Detected
2-Butanone (Methyl Ethyl Ketone)	55	Not Detected
Chloroform	5.5	Not Detected
1,1,1-Trichloroethane	5.5	Not Detected
Carbon Tetrachloride	5.5	Not Detected
Benzene	5.5	32
1,2-Dichloroethane	5.5	Not Detected
Trichloroethene	5.5	Not Detected
1,2-Dichloropropane	5.5	Not Detected
Bromodichloromethane	5.5	Not Detected
trans-1,3-Dichloropropene	5.5	Not Detected
4-Methyl-2-pentanone	11	Not Detected
Toluene	5.5	Not Detected
cis-1,3-Dichloropropene	5.5	Not Detected
1,1,2-Trichloroethane	5.5	Not Detected
Tetrachloroethene	5.5	Not Detected
2-Hexanone	11	Not Detected
Dibromochloromethane	5.5	Not Detected
Chlorobenzene	5.5	Not Detected
Ethyl Benzene	5.5	12
m,p-Xylene	5.5	28
o-Xylene	5.5	Not Detected
Styrene	5.5	Not Detected
Bromoform	5.5	Not Detected
1,1,2,2-Tetrachloroethane	5.5	Not Detected
cis-1,2-Dichloroethene	5.5	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	90 %	110
Hexane, 3-methyl-	589-34-4	72 %	32
Cyclohexane, methyl-	108-87-2	93 %	65
Cyclohexane, ethyl-	1678-91-7	86 %	35
Benzene, 1,3,5-trimethyl-	108-67 <i>-</i> 8	94 %	40



SAMPLE NAME: 7219A&B

ID#: 9811263-07A/B Modified VOST 5041A

File Name 91.1815 DIL Factor 4 28 28 28 151 1 1 1 1 1 2 2 2 2 2 3 3 1 1 1 1 1 2 2 2 2	

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	93	69-112
Toluene-d8	113	72-134
4-Bromofluorobenzene	98	78-119
Dibromofluoromethane	101	70-130
Benzene-d6	68	70-130



SAMPLE NAME: 7124A&B

ID#: 9811263-08A/B Modified VOST 5041A

File Name:		te of Collection: 11/13/98
	91118166	
Dil. Factor:	De la companya de la companya de la companya de la companya de la companya de la companya de la companya de la	te of Analysis: FILLW98 &

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	11	Not Detected
Vinyl Chloride	5.5	Not Detected
Bromomethane	11	Not Detected
Chloroethane	5.5	Not Detected
1,1-Dichloroethene	5.5	Not Detected
Carbon Disulfide	5.5	25
Acetone	55	Not Detected
Methylene Chloride	5.5	Not Detected
trans-1,2-Dichloroethene	5.5	Not Detected
1,1-Dichloroethane	5.5	Not Detected
Vinyl Acetate	11	Not Detected
2-Butanone (Methyl Ethyl Ketone)	55	Not Detected
Chloroform	5.5	Not Detected
1,1,1-Trichloroethane	5.5	Not Detected
Carbon Tetrachloride	5.5	Not Detected
Benzene	5.5	39
1,2-Dichloroethane	5.5	Not Detected
Trichloroethene	5.5	Not Detected
1,2-Dichloropropane	5.5	Not Detected
Bromodichloromethane	5.5	Not Detected
trans-1,3-Dichloropropene	5.5	Not Detected
4-Methyl-2-pentanone	11	Not Detected
Toluene	5.5	Not Detected
cis-1,3-Dichloropropene	5.5	Not Detected
1,1,2-Trichloroethane	5.5	Not Detected
Tetrachloroethene	5.5	Not Detected
2-Hexanone	11	Not Detected
Dibromochloromethane	5.5	Not Detected
Chlorobenzene	5.5	Not Detected
Ethyl Benzene	5.5	Not Detected
m,p-Xylene	5.5	Not Detected
o-Xylene	5.5	Not Detected
Styrene	5.5	Not Detected
Bromoform	5.5	Not Detected
1,1,2,2-Tetrachloroethane	5.5	Not Detected
cis-1,2-Dichloroethene	5.5	Not Detected

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	54
3-Cyclohepten-1-one	1121-64-8	91 %	150
Unknown	NA	NA	40
Nonanal	124-19-6	83 %	65



SAMPLE NAME: 7124A&B

ID#: 9811263-08A/B Modified VOST 5041A

File Name:	9111816	Date of Collection: 1118/98
Dil Factor: See See See	kar firstande en en en en en en en en en en en en en	Date of Analysis: 11/18/98

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	93	69-112
Toluene-d8	87	72-134
4-Bromofluorobenzene	100	78-119
Dibromofluoromethane	98	70-130
Benzene-d6	87	70-130

# 8

## AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 9811263-09A

Modified VOST 5041A

File Name: Date of Collection: NA. 5. Date of Analysis: 17/17/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported** 

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

Container Type: NA

SAMPLE NAME: Lab Blank

ID#: 9811263-09A Modified VOST 5041A

File Name: 9111704 9111704	collection: NA The State
File Name 9111704 P.W. A Date of C	malysis: 11/17/98 #

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	95	69-112
Toluene-d8	107	72-134
4-Bromofluorobenzene	96	78-119
Dibromofluoromethane	100	70-130



SAMPLE NAME: Lab Blank

ID#: 9811263-09B Modified VOST 5041A

File Name: 9111807 Date of Collections Dil. Factor: 100 100 Date of Analysis:	NA #Erg
Dil. Factor: Date of Analysis:	17/18/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

Container Type: NA



SAMPLE NAME: Lab Blank

ID#: 9811263-09B Modified VOST 5041A

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Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	94	69-112
Toluene-d8	104	72-134
4-Bromofluorobenzene	94	78-119
Dibromofluoromethane	99	70-130



180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA 95630-4719 (916) 985-1000 FAX: (916) 985-1020

Nº 017741

#### CHAIN-OF-CUSTODY RECORD Page $\perp$ of $\perp$ Contact Person Kichard Graboushi Project info: **Turn Around Time:** Company US Army Corps of Engineers Address 215 North 17 th St. City Durcha State NE Zip 68102 P.O. # NR Normal Project # DACW45 \_ 99 \_ P-0094 ☐ Rush Phone (402) 221-7784 FAX (402) 221-7769 Project Name Himco Dun p Specify Superfund Site Collected By: Signature \_ Canister Pressure / Vacuum Lab Field Sample I.D. Analyses Requested Date & Time I.D. Initial Final Receipt 0/4/13 71011 FB VOST SOU IA /8260 B / TTCE 11/12/98 0700 NA N/H UOST 5041 H / 8260 B / TICS 71254 B 0905 021/B NA NA 11/12/98 1101 NIA 031/12 7211 4 FB , UOST SOHIA 18260B/TICS 11/12/98 1230 UOST SOHIA/8260 B/TICS CHAIB 7/21 A&B 05A/R 7112 AF B 1/12/98 1654 UDST 5041A-/8260B/TICS Print Name RICHARD J GRABIUSKI Notes: Relinquished By: (Signature) Date/Time Received By: (Signature) Date/Time Baceived By: (Signature) Pate/Time Relinquished By: (Signature) Date/Time Qate/Time Temp, (°C) Air Bill # Opened By: **Custody Seals Intact?** Work Order # Shipper Name Lab Yes) No None N/A Use Only



#### WORK ORDER #: 9811284

Work Order Summary

CLIENT:

Mr. Steve Peterson

BILL TO: Same

U.S. Army Corps of Engineers

215 N. 17th Street, Zorinsky Bldg.

Omaha, NE 68102-4978

PHONE:

402-221-7183

P.O. # NR

FAX:

402-221-7769

PROJECT # DACW45-99-P-0094 Himco Dump

DATE RECEIVED:

11/17/98

DATE COMPLETED:

12/04/98

FRACTION#	NAME	TEST
01A/B	7205 A&B	VOST 5041A/8260B/TIC's
02A/B	7113 A&B	VOST 5041A/8260B/TIC's
03A/B	7116 A&B	VOST 5041A/8260B/TIC's
■ 04A/B	7106 A&B	VOST 5041A/8260B/TIC's
05A/B	7122 A&B	VOST 5041A/8260B/TIC's
. · 06A/B	7104 A&B	VOST 5041A/8260B/TIC's
07A/B	7123 A&B	VOST 5041A/8260B/TIC's
08A/B	7203 A&B	VOST 5041A/8260B/TIC's
09A/B	7215 A&B	VOST 5041A/8260B/TIC's
, 10A/B	7201 A&B	VOST 5041A/8260B/TIC's
11A	Lab Blank	VOST 5041A/8260B/TIC's
12A	Lab Blank	VOST 5041A/8260B/TIC's
13A	Lab Blank	VOST 5041A/8260B/TIC's

CERTIFIED BY:

Laboratory Director

date: 12/4/98

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

SAMPLE NAME: 7205 A&B

ID#: 9811284-01A Modified VOST 5041A

FIG. Nation.	90.220 15. 15. 15. 15. 15. 15. 15. 15. 15. 15.	ing Pigher Pries.
Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	17	Not Detected
Vinyl Chloride	8.5	Not Detected
Bromomethane	17	Not Detected
Chloroethane	8.5	Not Detected
1,1-Dichloroethene	8.5	Not Detected
Carbon Disulfide	8.5	11
Acetone	85	Not Detected
Methylene Chloride	8.5	Not Detected
trans-1,2-Dichloroethene	8.5	Not Detected
1,1-Dichloroethane	8.5	Not Detected
Vinyl Acetate	17	Not Detected
2-Butanone (Methyl Ethyl Ketone	85	Not Detected
Chloroform	8.5	Not Detected
1,1,1-Trichloroethane	<b>8.</b> 5	Not Detected
Carbon Tetrachloride	8.5	Not Detected
Benzene	8.5	Not Detected
1,2-Dichloroethane	8.5	Not Detected
Trichloroethene	8.5	Not Detected
1,2-Dichloropropane	8.5	Not Detected
Bromodichloromethane	` <b>8.</b> 5	Not Detected
trans-1,3-Dichloropropene	8.5	Not Detected
4-Methyl-2-pentanone	17	Not Detected
Toluene	8.5	Not Detected
cis-1,3-Dichloropropene	8.5	Not Detected
1,1,2-Trichloroethane	8.5	Not Detected
Tetrachloroethene	8.5	Not Detected
2-Hexanone	17	Not Detected
Dibromochloromethane	8.5	Not Detected
Chlorobenzene	8.5	Not Detected
Ethyl Benzene	8.5	Not Detected
m,p-Xylene	8.5	Not Detected
o-Xylene	8.5	Not Detected
Styrene	8.5	Not Detected
Bromoform	8.5	Not Detected
1,1,2,2-Tetrachloroethane	8.5	Not Detected
cis-1,2-Dichloroethene	8.5	Not Detected

#### **TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

Compound	CAS Number	Match Quality	Amount (nG)
Unknown	NA	NA	47
Unknown	NA	NA	46

SAMPLE NAME: 7205 A&B

ID#: 9811284-01A Modified VOST 5041A

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Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	101	69-112
Toluene-d8	96	72-134
4-Bromofluorobenzene	93	78-119
Dibromofluoromethane	106	70-130
Benzene-d6	77	70-130

**SAMPLE NAME: 7113 A&B** 

ID#: 9811284-02A Modified VOST 5041A

Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Professor Profes
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	3400	Not Detected
Vinyl Chloride	1700	490000 E
Bromomethane	3400	Not Detected
Chloroethane	1700	Not Detected
1,1-Dichloroethene	1700	7100
Carbon Disulfide	1700	69000
Acetone	17000	Not Detected
Methylene Chloride	1700	Not Detected
trans-1,2-Dichloroethene	1700	Not Detected
1,1-Dichloroethane	1700	10000
Vinyl Acetate	3400	Not Detected
2-Butanone (Methyl Ethyl Ketone)	17000	Not Detected
Chloroform	1700	6300
1,1,1-Trichloroethane	1700	Not Detected
Carbon Tetrachloride	1700	Not Detected
Benzene	1700	5000
1,2-Dichloroethane	1700	Not Detected
Trichloroethene	1700	340000 E
1,2-Dichloropropane	1700	Not Detected
Bromodichloromethane	1700	Not Detected
trans-1,3-Dichloropropene	1700	Not Detected
4-Methyl-2-pentanone	3400	Not Detected
Toluene	1700	240000
cis-1,3-Dichloropropene	1700	Not Detected
1,1,2-Trichloroethane	1700	Not Detected
Tetrachloroethene	1700	990000 E
2-Hexanone	3400	Not Detected
Dibromochloromethane	1700	Not Detected
Chlorobenzene	1700	Not Detected
Ethyl Benzene	1700	230000
m,p-Xylene	1700	130000
o-Xylene	1700	32000
Styrene	1700	8200
Bromoform	1700	Not Detected
1,1,2,2-Tetrachloroethane	1700	Not Detected
cis-1,2-Dichloroethene	1700	44000

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	Manual ID	200000
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	78 %	530000
1-Propene, 2-methyl-	115-11-7	80 %	320000
Hexane	110-54-3	91 %	75000
Cyclopentane, methyl-	96-37-7	80 %	45000
Cyclohexane, ethyl-	1678-91-7	Manual ID	71000

SAMPLE NAME: 7113 A&B

ID#: 9811284-02A Modified VOST 5041A

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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
Nonane	111-84-2	87 %	120000
.alphaPinene	80-56-8	96 %	230000
Octane, 2,2,6-trimethyl-	62016-28 <b>-</b> 8	Manual ID	96000
Decane	124-18-5	87 %	46000
Cyclopropane, 1,1-dimethyl-2-(3-methyl-1	68998-21-0	87 %	47000

E = Exceeds instrument calibration range.

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	93	69-112
Toluene-d8	93	72-134
4-Bromofluorobenzene	100	78-119
Dibromofluoromethane	96	70-130
Benzene-d6	93	70-130



SAMPLE NAME: 7116 A&B

ID#: 9811284-03A Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	19000	Not Detected
Vinyl Chloride	9500	520000
Bromomethane	19000	Not Detected
Chloroethane	9500	Not Detected
1,1-Dichloroethene	9500	Not Detected
Carbon Disulfide	9500	140000
Acetone	95000	Not Detected
Methylene Chloride	9500	Not Detected
trans-1,2-Dichloroethene	9500	Not Detected
1,1-Dichloroethane	9500	Not Detected
Vinyl Acetate	19000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	95000	Not Detected
Chloroform	9500	Not Detected
1,1,1-Trichloroethane	9500	Not Detected
Carbon Tetrachloride	9500	Not Detected
Benzene	9500	Not Detected
1,2-Dichloroethane	9500	Not Detected
Trichloroethene	9500	480000
1,2-Dichloropropane	9500	Not Detected
Bromodichloromethane	9500	Not Detected
trans-1,3-Dichloropropene	9500	Not Detected
4-Methyl-2-pentanone	19000	Not Detected
Toluene	9500	300000
cis-1,3-Dichloropropene	9500	Not Detected
1,1,2-Trichloroethane	9500	Not Detected
Tetrachloroethene	9500	1800000
2-Hexanone	19000	Not Detected
Dibromochloromethane	9500	Not Detected
Chlorobenzene	9500	Not Detected
Ethyl Benzene	9500	340000
m,p-Xylene	9500	190000
o-Xylene	9500	44000
Styrene	9500	Not Detected
Bromoform	9500	Not Detected
1,1,2,2-Tetrachloroethane	9500	Not Detected
cis-1,2-Dichloroethene	9500	39000

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	670000
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	86 %	1700000
1-Propene, 2-methyl-	115-11-7	Manual iD	860000
Octane	111-65-9	91 %	280000
Nonane	111-84-2	87 %	220000
.alphaPinene	80-56-8	<del>9</del> 6 %	490000

SAMPLE NAME: 7116 A&B

ID#: 9811284-03A Modified VOST 5041A

Figure 31/400	Phing expression (1/25) Paid de Villes (1/25)			
TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported				

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported				
Compound	CAS Number	Match Quality	Amount (nG)	
Octane, 2,5,6-trimethyl-	62016-14-2	Manual ID	320000	
Benzene, 1-ethyl-3-methyl-	620-14-4	95 %	130000	
Decane	124-18-5	90 %	130000	
3-Carene	13466-78-9	87 %	160000	

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	91	69-112
Toluene-d8	108	72-134
4-Bromofluorobenzene	112	78-119
Dibromofluoromethane	91	70-130
Benzene-d6	80	70-130

SAMPLE NAME: 7106 A&B

ID#: 9811284-04A

**Modified VOST 5041A** 

FIDURATES OF FREDR		<u> </u>
Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	13	Not Detected
Vinyl Chloride	6.5	Not Detected
Bromomethane	<b>13</b> ·	Not Detected
Chloroethane	6.5	Not Detected
1,1-Dichloroethene	6.5	Not Detected
Carbon Disulfide	6.5	9.1
Acetone	65	Not Detected
Methylene Chloride	6.5	1300
trans-1,2-Dichloroethene	6.5	8.6
1,1-Dichloroethane	6.5	Not Detected
Vinyl Acetate	13	Not Detected
2-Butanone (Methyl Ethyl Ketone)	65	Not Detected
Chloroform	6.5	Not Detected
1,1,1-Trichloroethane	6.5	Not Detected
Carbon Tetrachloride	6.5	9.5
Benzene	6.5	64
1,2-Dichloroethane	6.5	Not Detected
Trichloroethene	6.5	Not Detected
1,2-Dichloropropane	6.5	Not Detected
Bromodichloromethane	6.5	Not Detected
trans-1,3-Dichloropropene	6.5	Not Detected
4-Methyl-2-pentanone	13	Not Detected
Toluene	6.5	110
cis-1,3-Dichloropropene	6.5	Not Detected
1,1,2-Trichloroethane	6.5	Not Detected
Tetrachloroethene	6.5	Not Detected
2-Hexanone	13	Not Detected
Dibromochloromethane	6.5	Not Detected
Chlorobenzene	6.5	Not Detected
Ethyl Benzene	6.5	21
m,p-Xylene	6.5	54
o-Xylene	6.5	20
Styrene	6.5	31
Bromoform	6.5	Not Detected
1,1,2,2-Tetrachloroethane	6.5	Not Detected
cis-1,2-Dichloroethene	6.5	6.5

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	51
Butane	106-97-8	Manual ID	49
Pentane	109-66-0	90 %	34
Hexane	110-54-3	Manual ID	40

**SAMPLE NAME: 7106 A&B** 

ID#: 9811284-04A Modified VOST 5041A

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Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	103	69-112
Toluene-d8	95	72-134
4-Bromofluorobenzene	100	78-119
Dibromofluoromethane	96	70-130
Benzene-d6	98	70-130



SAMPLE NAME: 7122 A&B

ID#: 9811284-05A Modified VOST 5041A

Figure Di France		PARO POLEFIAN APTER BURO AUDIES MATER
Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	13	14
Vinyl Chloride	6.5	Not Detected
Bromomethane	13	Not Detected
Chloroethane	6.5	Not Detected
1,1-Dichloroethene	6.5	Not Detected
Carbon Disulfide	6.5	33
Acetone	65	Not Detected
Methylene Chloride	6.5	620
trans-1,2-Dichloroethene	6.5	Not Detected
1,1-Dichloroethane	6.5	Not Detected
Vinyl Acetate	13	Not Detected
2-Butanone (Methyl Ethyl Ketone)	65	Not Detected
Chloroform	6.5	Not Detected
1,1,1-Trichloroethane	6.5	Not Detected
Carbon Tetrachloride	6.5	8.7
Benzene	6.5	56
1,2-Dichloroethane	6.5	Not Detected
Trichloroethene	6.5	Not Detected
1,2-Dichloropropane	6.5	Not Detected
Bromodichloromethane	6.5	Not Detected
trans-1,3-Dichloropropene	6.5	Not Detected
4-Methyl-2-pentanone	13	Not Detected
Toluene	6.5	99
cis-1,3-Dichloropropene	6.5	Not Detected
1,1,2-Trichloroethane	6.5	Not Detected
Tetrachloroethene	6.5	14
2-Hexanone	13	Not Detected
Dibromochloromethane	6.5	Not Detected
Chlorobenzene	6.5	Not Detected
Ethyl Benzene	6.5	19
m,p-Xylene	6.5	49
o-Xylene	6.5	15
Styrene	6.5	50
Bromoform	6.5	Not Detected
1,1,2,2-Tetrachloroethane	6.5	Not Detected
cis-1,2-Dichloroethene	6.5	Not Detected

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	42
Butane	106-97-8	Manual ID	51
Pentane	109-66-0	90 %	45
Hexane	110-54-3	90 %	57



SAMPLE NAME: 7122 A&B

ID#: 9811284-05A Modified VOST 5041A



Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	94	69-112
Toluene-d8	96	72-134
4-Bromofluorobenzene	110	78-119
Dibromofluoromethane	96	70-130
Benzene-d6	95	70-130

SAMPLE NAME: 7104 A&B

ID#: 9811284-06A Modified VOST 5041A

FO-Inde Di-Figor		edgo gorgog (1600) Mogo mayas (1600)
Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	1300	Not Detected
Vinyl Chloride	650	Not Detected
Bromomethane	1300	1400
Chloroethane	650	Not Detected
1,1-Dichloroethene	650	Not Detected
Carbon Disulfide	650	Not Detected
Acetone	6500	Not Detected
Methylene Chloride	650	Not Detected
trans-1,2-Dichloroethene	650	Not Detected
1,1-Dichloroethane	650	Not Detected
Vinyl Acetate	1300	Not Detected
2-Butanone (Methyl Ethyl Ketone)	6500	Not Detected
Chloroform	650	Not Detected
1,1,1-Trichloroethane	650	Not Detected
Carbon Tetrachloride	650	Not Detected
Benzene	650	Not Detected
1,2-Dichloroethane	650	Not Detected
Trichloroethene	650	1900
1,2-Dichloropropane	650	Not Detected
Bromodichloromethane	650	Not Detected
trans-1,3-Dichloropropene	650	Not Detected
4-Methyl-2-pentanone	1300	Not Detected
Toluene	650	Not Detected
cis-1,3-Dichloropropene	650	Not Detected
1,1,2-Trichloroethane	650	Not Detected
Tetrachloroethene	650	85000
2-Hexanone	1300	Not Detected
Dibromochloromethane	650	Not Detected
Chlorobenzene	650	Not Detected
Ethyl Benzene	650	Not Detected
m,p-Xylene	650	Not Detected
o-Xylene	650	Not Detected
Styrene	650	Not Detected
Bromoform	650	Not Detected
1,1,2,2-Tetrachloroethane	650	Not Detected
cis-1,2-Dichloroethene	650	Not Detected

### **TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	27000
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	78 %	66000

SAMPLE NAME: 7104 A&B

ID#: 9811284-06A Modified VOST 5041A

PECANION	2004.1805 1807	incoentral desiration
Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	104	69-112
Toluene-d8	97	72-134
4-Bromofluorobenzene	104	78-119
Dibromofluoromethane	103	70-130
Benzene-d6	87	70-130



**SAMPLE NAME: 7123 A&B** 

ID#: 9811284-07A Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	100	Not Detected
Vinyl Chloride	50	Not Detected
Bromomethane	100	Not Detected
Chloroethane	50	Not Detected
1,1-Dichloroethene	50	Not Detected
Carbon Disulfide	50	150
Acetone	500	Not Detected
Methylene Chloride	50	Not Detected
trans-1,2-Dichloroethene	50	Not Detected
1,1-Dichloroethane	50	Not Detected
Vinyl Acetate	100	Not Detected
2-Butanone (Methyl Ethyl Ketone)	500	Not Detected
Chloroform	50	Not Detected
1,1,1-Trichloroethane	50	Not Detected
Carbon Tetrachloride	50	Not Detected
Benzene	50	2200
1,2-Dichloroethane	50	Not Detected
Trichloroethene	50	300
1,2-Dichloropropane	50	Not Detected
Bromodichloromethane	` 50	Not Detected
trans-1,3-Dichloropropene	50	Not Detected
4-Methyl-2-pentanone	100	Not Detected
Toluene	50	140
cis-1,3-Dichloropropene	50	Not Detected
1,1,2-Trichloroethane	50	Not Detected
Tetrachloroethene	50	1300
2-Hexanone	100	Not Detected
Dibromochloromethane	50	Not Detected
Chlorobenzene	50	Not Detected
Ethyl Benzene	50	1100
m,p-Xylene	50	1100
o-Xylene	50	650
Styrene	50	56
Bromoform	50	Not Detected
1,1,2,2-Tetrachloroethane	50	Not Detected
cis-1,2-Dichloroethene	50	120

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	81 %	3200
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	Manual ID	23000
Hexane	110-54-3	91 %	1400
Hydroxylamine, O-decyl-	29812-79-1	72 %	1600
3-Heptene, 3-ethyl-	74764-46-8	Manual ID	2200
1-Dotriacontanol	6624-79-9	Manual ID	2400

SAMPLE NAME: 7123 A&B

ID#: 9811284-07A Modified VOST 5041A

Compound	IENIAIIVELT IDI	CAS Number	NDS - Top 10 Reported Match Quality	Amount (nG)
PDI FORCE	TENTATIVELY	ENTIFIED COMPONE	2000	DANS: HADER
FIRE FIELDS	36 X D	57	<u> </u>	TRIBLE SAFER

Compound	CAS Number	Match Quality	Amount (nG)
Benzene, 1-ethyl-3-methyl-	620-14-4	91 %	1500
Benzene, 1,2,3-trimethyl-	526-73-8	93 %	1200
Benzene, 1-ethenyl-2-methyl-	611-15-4	83 %	1300
Benzene, 1-methyl-3-(1-methylethyl)-	535-77-3	94 %	1700

Q = Exceeds Quality Control limits.

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	103	69-112
Toluene-d8	99	72-134
4-Bromofluorobenzene	162 Q	78-119
Dibromofluoromethane	103	70-130
Benzene-d6	112	70-130



SAMPLE NAME: 7203 A&B

ID#: 9811284-08A Modified VOST 5041A

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File Yeares Bis Ference	35 80 D	Date Schoolseries - ABBE Bare Schoolseries - ASBEE	
Compound	Det. Limit (nG)	Amount (nG)	
Chloromethane	13	Not Detected	
Vinyl Chloride	6.5	Not Detected	
Bromomethane	13	Not Detected	
Chloroethane	6.5	Not Detected	
1,1-Dichloroethene	6.5	Not Detected	
Carbon Disulfide	6.5	32	
Acetone	65	Not Detected	
Methylene Chloride	6.5	Not Detected	
trans-1,2-Dichloroethene	6.5	Not Detected	
1,1-Dichloroethane	6.5	Not Detected	
Vinyl Acetate	13	Not Detected	
2-Butanone (Methyl Ethyl Ketone)	65	Not Detected	
Chloroform	6.5	Not Detected	
1,1,1-Trichloroethane	6.5	160	
Carbon Tetrachloride	6.5	Not Detected	
Benzene	6.5	33	
1,2-Dichloroethane	6.5	Not Detected	
Trichloroethene	6.5	Not Detected	
1,2-Dichloropropane	6.5	Not Detected	
Bromodichloromethane	` 6.5	Not Detected	
trans-1,3-Dichloropropene	6.5	Not Detected	
4-Methyl-2-pentanone	13	Not Detected	
Toluene	6.5	7.2	
cis-1,3-Dichloropropene	6.5	Not Detected	
1,1,2-Trichloroethane	6.5	Not Detected	
Tetrachloroethene	6.5	4900 É	
2-Hexanone	13	Not Detected	
Dibromochloromethane	6.5	Not Detected	
Chlorobenzene	6.5	Not Detected	
Ethyl Benzene	6.5	Not Detected	
m,p-Xylene	6.5	11	
o-Xylene	6.5	Not Detected	
Styrene	6.5	Not Detected	
Bromoform	6.5	Not Detected	
1,1,2,2-Tetrachloroethane	6.5	Not Detected	
cis-1,2-Dichloroethene	6.5	Not Detected	

### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	Manual ID	1000
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	78 %	1500
Methane, trichlorofluoro-	75-69-4	90 %	280
Nonanal	124-19-6	72 %	46

E = Exceeds instrument calibration range.

ID#: 9811284-08A

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Surrogates	% Recovery	Method Limits	
1,2-Dichloroethane-d4	103	69-112	
Toluene-d8	94	72-134	
4-Bromofluorobenzene	101	78-119	
Dibromofluoromethane	92	70-130	
Benzene-d6	100	70-130	

SAMPLE NAME: 7215 A&B

ID#: 9811284-09A Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	13	Not Detected
Vinyl Chloride	6.5	Not Detected
Bromomethane	13	Not Detected
Chloroethane	6.5	Not Detected
1,1-Dichloroethene	6.5	9.4
Carbon Disulfide	6.5	20
Acetone	65	Not Detected
Methylene Chloride	6.5	Not Detected
trans-1,2-Dichloroethene	6.5	11
1,1-Dichloroethane	6.5	Not Detected
Vinyl Acetate	13	Not Detected
2-Butanone (Methyl Ethyl Ketone)	65	Not Detected
Chloroform	6.5	Not Detected
1,1,1-Trichloroethane	6.5	Not Detected
Carbon Tetrachloride	6.5	Not Detected
Benzene	6.5	39
1,2-Dichloroethane	6.5	Not Detected
Trichloroethene	6.5	Not Detected
1,2-Dichloropropane	6.5	Not Detected
Bromodichloromethane	6.5	Not Detected
trans-1,3-Dichloropropene	6.5	Not Detected
4-Methyl-2-pentanone	13	Not Detected
Toluene	6.5	14
cis-1,3-Dichloropropene	6.5	Not Detected
1,1,2-Trichloroethane	6.5	Not Detected
Tetrachioroethene	6.5	Not Detected
2-Hexanone	13	Not Detected
Dibromochloromethane	6.5	Not Detected
Chlorobenzene	6.5	Not Detected
Ethyl Benzene	6.5	17
m,p-Xylene	6.5	32
o-Xylene	6.5	16
Styrene	6.5	Not Detected
Bromoform	6.5	Not Detected
1,1,2,2-Tetrachloroethane	6.5	Not Detected
cis-1,2-Dichloroethene	6.5	9.2

### **TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	33
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	Manual ID	34
Unknown	NA	NA	87

SAMPLE NAME: 7215 A&B

ID#: 9811284-09A Modified VOST 5041A

FU Minus Misphor	9974( <b>5</b> 1)	Index Folganous Constitution
Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	98	69-112
Toluene-d8	97	72-134
4-Bromofluorobenzene	103	78-119
Dibromofluoromethane	95	70-130
Benzene-d6	95	70-130

SAMPLE NAME: 7201A&B

ID#: 9811284-10A Modified VOST 5041A

Tidanay Di Poros	97809) ( <u>4</u>	Bas o soluțion preside Gregorianist redec
Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	13	Not Detected
Vinyl Chloride	6.5	Not Detected
Bromomethane	13	Not Detected
Chloroethane	6.5	Not Detected
1,1-Dichloroethene	6.5	6.4
Carbon Disulfide	6.5	22
Acetone	65	Not Detected
Methylene Chloride	6.5	Not Detected
rans-1,2-Dichloroethene	6.5	9.3
,1-Dichloroethane	6.5	Not Detected
Vinyl Acetate	13	Not Detected
2-Butanone (Methyl Ethyl Ketone)	65	Not Detected
Chloroform	6.5	Not Detected
1,1,1-Trichloroethane	6.5	Not Detected
Carbon Tetrachloride	6.5	Not Detected
Benzene	6.5	42
1,2-Dichloroethane	6.5	Not Detected
Trichloroethene	6.5	Not Detected
1,2-Dichloropropane	6.5	Not Detected
Bromodichloromethane	6.5	Not Detected
trans-1,3-Dichloropropene	6.5	Not Detected
4-Methyl-2-pentanone	13	Not Detected
Toluene	6.5	14
cis-1,3-Dichloropropene	6.5	Not Detected
1,1,2-Trichloroethane	6.5	Not Detected
Tetrachloroethene	6.5	Not Detected
2-Hexanone	13	Not Detected
Dibromochloromethane	6.5	Not Detected
Chlorobenzene	6.5	Not Detected
Ethyl Benzene	6.5	13
m,p-Xylene	6.5	26
o-Xylene	6.5	11
Styrene	6.5	Not Detected
Bromoform	6.5	Not Detected
1,1,2,2-Tetrachloroethane	6.5	Not Detected
cis-1,2-Dichloroethene	6.5	6.9

### **TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71 <b>-</b> 8	83 %	32

Container Type: VOST Tube

Surrogates % Recovery Method Limits

SAMPLE NAME: Lab Blank

ID#: 9811284-11A Modified VOST 5041A

Tioning Disper		One design (a) Burd adials (1994)
Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	100	69-112
Toluene-d8	95	72-134

93

115

4-Bromofluorobenzene

Dibromofluoromethane

78-119

70-130

SAMPLE NAME: Lab Blank

ID#: 9811284-11B Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	11
Chloroethane	5.0	Not Detected
,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
rans-1,2-Dichloroethene	5.0	Not Detected
,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
rans-1,3-Dichloropropene	5.0	Not Detected
1-Methyl-2-pentanone	10	Not Detected
Coluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
,1,2-Trichloroethane	<b>5.0</b>	Not Detected
etrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
thyl Benzene	5.0	Not Detected
n,p-Xylene	5.0	Not Detected
>-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported** 

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

Q = Exceeds Quality Control limit

Container Type: NA

SAMPLE NAME : Lab Blank

ID#: 9811284-11B Modified VOST 5041A

1915 Marks 1916 1960 5	35 <b>9.5</b> 7.	ine e edicion de incompais rese
Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	126 Q	69-112
Toluene-d8	92	72-134
4-Bromofluorobenzene	98	78-119
Dibromofluoromethane	107	70-130

SAMPLE NAME: Lab Blank

ID#: 9811284-11C Modified VOST 5041A

Compound	Det. Limit (nG)		Amount (nG)
Chloromethane	10		Not Detected
Vinyl Chloride	5.0		Not Detected
Bromomethane	10		Not Detected
Chloroethane	5.0		Not Detected
1,1-Dichloroethene	5.0		Not Detected
Carbon Disulfide	5.0		Not Detected
Acetone	50		Not Detected
Methylene Chloride	5.0		Not Detected
trans-1,2-Dichloroethene	5.0		Not Detected
1,1-Dichloroethane	5.0	. <i></i>	Not Detected
Vinyl Acetate	10		Not Detected
2-Butanone (Methyl Ethyl Ketone)	50		Not Detected
Chioroform	5.0		Not Detected
1,1,1-Trichloroethane	5.0		Not Detected
Carbon Tetrachloride	5.0		Not Detected
Benzene	5.0		Not Detected
1,2-Dichloroethane	5.0		Not Detected
Trichloroethene	5.0		Not Detected
1,2-Dichloropropane	5.0		Not Detected
Bromodichloromethane	5.0		Not Detected
trans-1,3-Dichloropropene	5.0		Not Detected
4-Methyl-2-pentanone	10		Not Detected
Toluene	5.0		Not Detected
cis-1,3-Dichloropropene	5.0		Not Detected
1,1,2-Trichloroethane	5.0		Not Detected
Tetrachloroethene	5.0		Not Detected
2-Hexanone	10		Not Detected
Dibromochloromethane	5.0		Not Detected
Chlorobenzene	5.0		Not Detected
Ethyl Benzene	5.0		Not Detected
m,p-Xylene	5.0		Not Detected
o-Xylene	5.0		Not Detected
Styrene	5.0		Not Detected
Bromoform	5.0		Not Detected
1,1,2,2-Tetrachloroethane			Not Detected
cis-1,2-Dichloroethene	5.0 5.0		Not Detected
old- 1,2-DIG NOI OCH ICHC	5.0		Hot Detected
	Y IDENTIFIED COMPOUN	•	
Compound	CAS Number	Match Quality	Amount (nG)
None Identified			
Container Type: NA			
Surrogates	% Recovery		Method Limits

SAMPLE NAME : Lab Blank

ID#: 9811284-11C Modified VOST 5041A

Fire New Co. Dis Facelory	tr Sciss	Inco Solisios Vs. Pile o mayar (Silis
Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	114	69-112
Toluene-d8	95	72-134
4-Bromofluorobenzene	97	78-119
Dibromofluoromethane	104	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA 95630-4719 (916) 985-1000 FAX: (916) 985-1020

Nº 017839

Page \_\_\_\_ of \_\_\_\_

# CHAIN-OF-CUSTODY RECORD

			<u> </u>				
Company Address 6	2001	Figurers  City Omaha State  EAX (402) 221-		Project info: P.O. # NIZ Project #DACW45-99-P-0094 Project Name Himco Dump Super fund Site	Norma □ Rush		ify
Lab I.D.	Field Sample I.D.	Date & Time	Analy	yses Requested	Canister Initial	r Pressure / Final	/ Vacuum   Receipt
CIMB	7205AEB	11/16/98 0700	UOST 5041 V	4/8260B/Tis	N/A	N/A	
UPAK	7113 A & B	11/16/97,0840		4/8260B/ TICS	N/H	N/A	
13AB	7116 A & B	11/16/98 0857		4/8260B/TICS	NA	NA	
MAIB	7106 A É B	11/16/98 0945		A/82608/TICS	NIA	NA	
OSNO	7122 A & B	11/16/98 1005	UOST : SOYI	A/8260B/Tics	N/A	N/A	
DGAIB	7104 A &B	11/16/98 1039	VOST 5041	A/8260B/TICS	N/A	NA	
OTAB	7123 AEB	1/16/98 1131	UOST 5041	1A/8260B/TICS	N/A	NIA	
OFAIR	7703 A & B	11/14/8 1414	U05T 5041	A/8260B/TICs	~/A	NA	
-63/16	7215 A & B	11/16/98 1521	VOST SOY	11A/8260B/TICS	N/A N/A	N/A	
LOALE	17201 A & B	11/16/92 1610	USST 504	11A 18260 B/TICS	N/A	N/M	
Belinguishe	ed By: (S) and turk) Day Time	30 FICHARD J.	GRABOLUKI	Notes:	•		
Relinquished B	(Signature) Date/Time	Received By: (Signature) Date/	Time				
Relinquished By	y: (Signature) Date/Time	Received By: (Signature) / Date/	AKO AP	1/17/98 945			
Lab [	Shipper Name Air Bi		y! Date/Time Te	emp. (°C) Condition Custody Seal	Is Intact? one · N/A	98112	2 8 4
Use Only	PLUNCK INCHARUM	21101 1 1 2	17/17/48 771 (	D)) ICC (COOC) (Yes) No No	III6 IVA		3,0 3



Work Order Summary

**CLIENT:** 

Mr. Steve Peterson

**BILL TO: Same** 

U.S. Army Corps of Engineers

215 N. 17th Street, Zorinsky Bldg.

Omaha, NE 68102-4978

PHONE:

402-221-7183

P.O. # NR

FAX:

402-221-7769

PROJECT # DACW45-99-P-0094 Himco Dump

DATE RECEIVED:

11/18/98

DATE COMPLETED: 12/4/98

FRACTION#	NAME	TEST
01A/B	7111 A&B	VOST 5041A/8260B/TIC's
02A/B	7207 A&B	VOST 5041A/8260B/TTC's
03A/B	7214 A&B	VOST 5041A/8260B/TIC's
04A/B	7213 A&B	VOST 5041A/8260B/TIC's
05A/B	7114 A&B	VOST 5041A/8260B/TIC's
06A	Lab Blank	VOST 5041A/8260B/TIC's

CERTIFIED BY:

Laboratory Director

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

### LABORATORY NARRATIVE

### Analysis of Volatile Organic Compounds in VOST Cartridges by EPA 5041A/8260B U.S. Army Corps of Engineers

J.S. Army Corps of Engineer Work Order #9811313

Five Tenax and Tenax/charcoal tube pairs (VOST cartridges) were received on November 18, 1998. The sacrificial temperature check vial was not provided with the shipment, therefore the actual temperature of the shipment was not recorded. The samples were received on ice and therefore their integrity is not in question. The laboratory performed the analysis via EPA SW-846 Method 5041A using GC/MS in the full scan mode. The method involves thermal desorption of the VOST cartridges using an inert gas. The gas stream is then bubbled through 5 mL of organic free water and trapped on the sorbent trap of the purge and trap system. The trap is thermally desorbed to elute the components into the GC system for further separation. See the data sheets for the reporting limits for each compound.

Recovery of the LCS compound 11-DCE was slightly lower than the advisory QC limits of 70-130% in LCS analyzed on Nov11,1998.

Due to uncertainity of analyte concentrations, bag dilution was performed on all the samples.

There were no other out of the ordinary circumstances to report.

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
- J Estimated Value.
- E Exceeds instrument calibration range.
- S Saturated Peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- N The identification is based on presumptive evidence.

SAMPLE NAME: 7207 A&B

ID#: 9811313-02A/B

### Modified VOST 5041A

File Name:	9113044: Date of Collection11/11/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date of Analysis: 11/30/98 - Date
Dil Factor:	3.9 Date of Analysis: 11/30/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	39	Not Detected
Vinyl Chloride	20	380
Bromomethane	39	Not Detected
Chloroethane	20	58
1,1-Dichloroethene	20	38
Carbon Disulfide	20	210
Acetone	200	Not Detected
Methylene Chloride	20	Not Detected
trans-1,2-Dichloroethene	20	86
1,1-Dichloroethane	20	7700 E
Vinyl Acetate	39	Not Detected
2-Butanone (Methyl Ethyl Ketone)	200	Not Detected
Chloroform	20	Not Detected
1,1,1-Trichloroethane	20	Not Detected
Carbon Tetrachloride	20 .	Not Detected
Benzene	20	870
1,2-Dichloroethane	20	36
Trichloroethene	20	350
1,2-Dichloropropane	20	210
Bromodichloromethane	20	Not Detected
trans-1,3-Dichloropropene	20	Not Detected
4-Methyl-2-pentanone	39	Not Detected
Toluene	20	85
cis-1,3-Dichloropropene	20	Not Detected
1,1,2-Trichloroethane	20	Not Detected
Tetrachloroethene	20	36
2-Hexanone	39	Not Detected
Dibromochloromethane	20	Not Detected
Chlorobenzene	20	230
Ethyl Benzene	20	38
m,p-Xylene	20	96
o-Xylene	- 20	100
Styrene	20	Not Detected
Bromoform	20	Not Detected
1,1,2,2-Tetrachloroethane	20	Not Detected
cis-1,2-Dichloroethene	20	190

Compound	<b>CAS Number</b>	<b>Match Quality</b>	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	90 %	3200
Methane, dichlorofluoro-	75-43-4	95 %	3700
Ethyl ether	60-29-7	90 %	1200
Heptane, 2-methyl-	592-27-8	Manual ID	720
Cyclohexane, 1,3-dimethyl-, cis-	638-04-0	91 %	1000
Cyclohexane, 1,2-dimethyl-, trans-	6876-23-9	94 %	820

SAMPLE NAME: 7207 A&B

ID#: 9811313-02A/B Modified VOST 5041A

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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported				
Compound CAS Number Match Quality Amous				
.alphaPinene	80-56-8	96 %	980	
Benzene, 1-ethyl-3-methyl-	620-14-4	80 %	590	
MENTH-1(8)-ENE	0-00-0	74 %	1800	
Benzene, (1-methylethyl)-	98-82-8	Manual ID	560	

E = Exceeds instrument calibration range.

Q = Exceeds Quality Control limits.

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	102	69-112
Toluene-d8	98	72-134
4-Bromofluorobenzene	120 Q	78-119
Dibromofluoromethane	96	70-130

SAMPLE NAME: 7214 A&B

ID#: 9811313-03A/B Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	150	Not Detected
Vinyl Chloride	75	Not Detected
Bromomethane	150	Not Detected
Chloroethane	75	82
1,1-Dichloroethene	75	Not Detected
Carbon Disulfide	75	150
Acetone	750	Not Detected
Methylene Chloride	75	Not Detected
trans-1,2-Dichloroethene	75	150
1,1-Dichloroethane	75	200
Vinyl Acetate	150	Not Detected
2-Butanone (Methyl Ethyl Ketone)	750	Not Detected
Chloroform	75	Not Detected
1,1,1-Trichloroethane	75	Not Detected
Carbon Tetrachloride	75	Not Detected
Benzene	75	4600
1,2-Dichloroethane	75	Not Detected
Trichloroethene	75	190
1,2-Dichloropropane	75	Not Detected
Bromodichloromethane	75	Not Detected
trans-1,3-Dichloropropene	75	Not Detected
4-Methyl-2-pentanone	150	Not Detected
Toluene	75	440
cis-1,3-Dichloropropene	75	Not Detected
1,1,2-Trichloroethane	75	Not Detected
Tetrachloroethene	75	Not Detected
2-Hexanone	150	Not Detected
Dibromochloromethane	75	Not Detected
Chlorobenzene	75	390
Ethyl Benzene	75	480
m,p-Xylene	75	1400
o-Xylene	· 75	100
Styrene	75	Not Detected
Bromoform	75	Not Detected
1,1,2,2-Tetrachloroethane	75	Not Detected
cis-1,2-Dichloroethene	75	200

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Hexane, 2-methyl-	591-76-4	Manual ID	12000
Hexane, 3-methyl-	589-34-4	86 %	14000
1-Butanol, 2-ethyl-	97-95-0	Manual ID	12000
Heptane	142-82-5	83 %	8700
Cyclohexane, methyl-	108-87-2	70 %	42000
Acetic acid, trifluoro-, octvl ester	2561-21-9	Manual ID	12000

SAMPLE NAME: 7214 A&B

ID#: 9811313-03A/B Modified VOST 5041A

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File Name: 9113045 ** Date of Dill. Factor: 77 17 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported					
Compound	ompound CAS Number Match Quality A				
Benzene, (1-methylethyl)-	98-82-8	94 %	9900		
Benzene, propyl-	103-65-1	87 %	22000		
Benzene, 1,2,3-trimethyl-	526-73-8	91 %	19000		
Benzene, 1,2,4-trimethyl-	95-63-6	91 %	10000		

Q = Exceeds Quality Control limits.
Container Type: VOST Tube

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	105	69-112
Toluene-d8	101	72-134
4-Bromofluorobenzene	218 Q	78-119
Dibromofluoromethane	94	70-130

SAMPLE NAME: 7213 A&B

ID#: 9811313-04A/B

Modified VOST 5041A

File Name: 913046 9113046 Pil. Factor: 913046	Date of Collection: 1.7/17/98
DIL Factor:	Date of Analysis: 12 7/98 28

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	77	Not Detected
Vinyl Chloride	39	1300
Bromomethane	77	Not Detected
Chloroethane	39	Not Detected
1,1-Dichloroethene	39	Not Detected
Carbon Disulfide	39	100
Acetone	390	Not Detected
Methylene Chloride	39	Not Detected
trans-1,2-Dichloroethene	39	97
1,1-Dichloroethane	39	1900
Vinyl Acetate	77	Not Detected
2-Butanone (Methyl Ethyl Ketone)	390	Not Detected
Chloroform	39	Not Detected
1,1,1-Trichloroethane	39	Not Detected
Carbon Tetrachloride	39	Not Detected
Benzene	39	4000
1,2-Dichloroethane	39	Not Detected
Trichloroethene	39	290
1,2-Dichloropropane	<b>39</b>	380
Bromodichloromethane	39	Not Detected
trans-1,3-Dichloropropene	39	Not Detected
4-Methyl-2-pentanone	77	Not Detected
Toluene	39	120
cis-1,3-Dichloropropene	<b>39</b>	Not Detected
1,1,2-Trichloroethane	39	Not Detected
Tetrachloroethene	39	Not Detected
2-Hexanone	77	Not Detected
Dibromochloromethane	39	Not Detected
Chiorobenzene	39	Not Detected
Ethyl Benzene	39	Not Detected
m,p-Xylene	39	51
o-Xylene	. 39	Not Detected
Styrene	39	Not Detected
Bromoform	39	Not Detected
1,1,2,2-Tetrachloroethane	39	Not Detected
cis-1,2-Dichloroethene	39	370

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
2-Butenal, (E)-	123-73-9	Manual ID	20000
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	Manual ID	21000
Butane	106-97-8	Manual ID	16000
Unknown	NA	NA	7400
Pentane	109-66-0	80 %	6600
Hexane	110-54-3	90 %	2200

SAMPLE NAME: 7213 A&B

ID#: 9811313-04A/B Modified VOST 5041A

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<ul> <li>■ ************************************</li></ul>		Date of Collection: 11/17/98  Date of Analysis: 12/ 1/98

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number Match Quality		Amount (nG)
Hexane, 2,2-dimethyl-	590-73-8	72 %	6300
Octane	111-65-9	Manual ID	1300
Bicyclo[2.2.1]heptane, 1,7,7-trimethyl-	464-15-3	Manual ID	3700
Bicyclo[2.2.1]heptane, 2,2,3-trimethyl-,	20536-41-8	97 %	11000

Q = Exceeds Quality Control limits.
Container Type: VOST Tube

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	96	69-112
Toluene-d8	98	72-134
4-Bromofluorobenzene	122 Q	78-119
Dibromofluoromethane	95	70-130

SAMPLE NAME: 7114 A&B

ID#: 9811313-05A/B Modified VOST 5041A

File Name	9113049	Date of Collection: 11/17/08
Dil. Factor:	9113049	Date of Analysis= 12/1/982

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	190	Not Detected
Vinyl Chloride	95	4800
Bromomethane	190	Not Detected
Chloroethane	95	120
1,1-Dichloroethene	95	Not Detected
Carbon Disulfide	95	620
Acetone	950	Not Detected
Methylene Chloride	95	Not Detected
trans-1,2-Dichloroethene	95	440
1,1-Dichloroethane	95	1000
Vinyl Acetate	190	Not Detected
2-Butanone (Methyl Ethyl Ketone)	950	Not Detected
Chloroform	95	Not Detected
1,1,1-Trichloroethane	95	Not Detected
Carbon Tetrachloride	95 .	Not Detected
Benzene	95	15000
1,2-Dichloroethane	95	Not Detected
Trichloroethene	95	920
1,2-Dichloropropane	95	Not Detected
Bromodichloromethane	95	Not Detected
trans-1,3-Dichloropropene	95	Not Detected
4-Methyl-2-pentanone	190	Not Detected
Toluene	95	4000
cis-1,3-Dichloropropene	95	Not Detected
1,1,2-Trichloroethane	95	Not Detected
Tetrachloroethene	95	8000
2-Hexanone	190	Not Detected
Dibromochloromethane	95	Not Detected
Chlorobenzene	95	Not Detected
Ethyl Benzene	95	22000 E
m,p-Xylene	95	19000
o-Xylene	95	7200
Styrene	95	Not Detected
Bromoform	95	Not Detected
1,1,2,2-Tetrachioroethane	95	Not Detected
cis-1,2-Dichloroethene	95	810

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	Manual ID	14000
Cyclopentane, 1,2-dimethyl-, trans-	822-50-4	95 %	6300
Cyclohexane, methyl-	108-87-2	87 %	7900
Octane	111-65-9	91 %	9500
Cyclohexane, ethyl-	1678-91-7	Manual ID	9200
Heptane, 2,4-dimethyl-	2213-23-2	72 %	4600

SAMPLE NAME: 7114 A&B

ID#: 9811313-05A/B Modified VOST 5041A

File Name:	a green	9113049	Date of Collection	E 11/17/98
Dil. Factor.		19 - 19	Date of Analysis:	12/1/98

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
Nonane	111-84-2	91 %	4300
Nonane, 3-methyl-	5911-04-6	Manual ID	9800
Benzene, (1-methylethyl)-	98-82-8	91 %	11000
Heptane, 2,3,6-trimethyl-	4032-93-3	Manual ID	9200

E = Exceeds instrument calibration range.

Surrogates	% Recovery	Method Limits	
1,2-Dichloroethane-d4	96	69-112	
Toluene-d8	104	72-134	
4-Bromofluorobenzene	109	78-119	
Dibromofluoromethane	99	70-130	

SAMPLE NAME: Lab Blank

ID#: 9811313-06A Modified VOST 5041A

File Name: Date of Collection: NA 9113033 Service Analysis: 11/3098	
DIL Factor: Date Of Analysis: 173090	2000

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	· 5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

Q = Exceeds Quality Control limits.

Container Type: NA

SAMPLE NAME : Lab Blank

ID#: 9811313-06A

### **Modified VOST 5041A**

File Name: Dil: Factor: 11 - 12 - 12 - 12 - 12 - 12 - 12 - 12	9113033 2/4 2/2 2/2 2/2 2/2 2/2 2/2 2/2 2/2 2/2	Date of Collection: NA Date of Analysis - 17/30/98
Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	114 Q	69-112
Toluene-d8	95	72-134
4-Bromofluorobenzene	97	78-119
Dibromofluoromethane	104	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA 95630-4719 (916) 985-1000 FAX: (916) 985-1020

Nº 017841

Page \_ of \_

### **CHAIN-OF-CUSTODY RECORD** Contact Person Kichard Grabowski **Turn Around Time:** Project info: Company US Army Carps of Engineers Address 215 N. 17 th St. City Omi P.O. #\_\_\_NR Normal City Omaha State Mt Zip 68102 Project #DACW 45-99-P-0094 Rush Specify Phone (402) 221-7784 Project Name Himeo Dump EAX (402)221-7769 Superful Site Collected By: Signature Canister Pressure / Vacuum Lab Field Sample I.D. Date & Time **Analyses Requested** I.D. Initial Final Receipt 7111 AFB OIAB UOST 50414/8260B/TICS 0700 N/A SAAB N/A 7207 AEB 11/17/9× 0819 JOST 5041A/8260B/TKS N/H BAIB 11/17/98 0919 7214 ACB UST 5041 A/82605/TICS DAVIB 7213 A & B 11/17/98 1042 UDST 5041 A/8260 B/TICS ~/A 05AB 7114 ME B USST 5041 A/8260 B/TICS 11/17/96 1256 Print Name Notes: KICHARDJ. CIRABOWSKY Relinquished By (Signature) Date/Time Received By: (Signalure) Date/Time Relinquished By: (Signature) Date/Time Muncke ATT 1/18/98 140 Shipper Name Date/Time Work Order # Air Bill # Opened By: Condition A Custody Seals Intact? Lab 11/18/98 1140 On (Ce) 9811313 809286251978 Yes No None N/A Use Only



AN ENVIRONMENTAL ANALYTICAL LABORATORY

### WORK ORDER #: 9812153

Work Order Summary

CLIENT:

Mr. Steve Peterson

BILL TO: Same

U.S. Army Corps of Engineers 215 N. 17th Street, Zorinsky Bldg.

Omaha, NE 68102-4978

PHONE:

402-221-7183

P.O. # NR

FAX:

402-221-7769

PROJECT # DACW45-99-P-0094 Himco Dump

DATE RECEIVED:

12/10/98

DATE COMPLETED: 12/15/98

FRACTION #	NAME
01A/B	7705 A&B
02A/B	7706 A&B
03A/B	7703 A&B
04A/B	7708 A&B
05A/B	7709 A&B
06A	Lab Blank

TEST
VOST 5041A/8260B/TIC's
VOST 5041A/8260B/TIC's
VOST 5041A/8260B/TIC's
VOST 5041A/8260B/TIC's
VOST 5041A/8260B/TIC's
VOST 5041A/8260B/TIC's

Laboratory Director

DATE: 12/15/198

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

### LABORATORY NARRATIVE

### Analysis of Volatile Organic Compounds in VOST Cartridges by EPA 5041A/8260B U.S. Army Corps of Engineers Work Order #9812153

Five Tenax and Tenax/charcoal tube pairs (VOST cartridges) were received on December 10, 1998. The sacrificial temperature check vial was not provided with the shipment, therefore the actual temperature of the shipment was not recorded. The samples were received on ice and therefore their integrity is not in question. The laboratory performed the analysis via EPA SW-846 Method 5041A using GC/MS in the full scan mode. The method involves thermal desorption of the VOST cartridges for 11 min. at 180° C using an inert gas. The gas stream is then bubbled through 5 mL of organic free water and trapped on the sorbent trap of the purge and trap system. The trap is thermally desorbed to elute the components into the GC system for further separation. See the data sheets for the reporting limits for each compound.

Bromomethane was detected in the laboratory blank. The "B" flag was applied to the associated results.

Bag dilution was performed on the first sample 7705A&B to screen the sample.

Recovery of the surrogate compound 1,2-Dichloroethane-d4 was slightly above the laboratory established limits of 69-112% in the following samples: 7705 A&B, 7703 A&B, 7708 A&B, 7709 A&B, Lab Blank and LCS. Surrogate recovery of 4-Bromofluorobenzene was above the laboratory established limit of 78-119% in sample 7708 A&B.

There were no other out of the ordinary circumstances to report.

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
- J Estimated Value.
- E Exceeds instrument calibration range.
- S Saturated Peak.
- O Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- N The identification is based on presumptive evidence.

SAMPLE NAME: 7705 A&B

ID#: 9812153-01A/B Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	13	Not Detected
Vinyl Chloride	6.5	Not Detected
Bromomethane	13	23 B
Chloroethane	6.5	Not Detected
1,1-Dichloroethene	6.5	Not Detected
Carbon Disulfide	6.5	Not Detected
Acetone	65	Not Detected
Methylene Chloride	6.5	Not Detected
trans-1,2-Dichloroethene	6.5	Not Detected
1,1-Dichloroethane	6.5	Not Detected
Vinyl Acetate	13	Not Detected
2-Butanone (Methyl Ethyl Ketone)	65	Not Detected
Chloroform	6.5	Not Detected
1,1,1-Trichloroethane	6.5	Not Detected
Carbon Tetrachloride	6.5	Not Detected
Benzene	6.5	46
1,2-Dichloroethane	6.5	Not Detected
Trichloroethene	6.5	Not Detected
1,2-Dichloropropane	6.5	Not Detected
Bromodichloromethane	6.5	Not Detected
trans-1,3-Dichloropropene	6.5	Not Detected
4-Methyl-2-pentanone	13	Not Detected
Toluene	6.5	17
cis-1,3-Dichloropropene	6.5	Not Detected
1,1,2-Trichloroethane	6.5	Not Detected
Tetrachloroethene	6.5	Not Detected
2-Hexanone	13	Not Detected
Dibromochloromethane	6.5	Not Detected
Chlorobenzene	6.5	Not Detected
Ethyl Benzene	6.5	Not Detected
m,p-Xylene	6.5	16
o-Xylene	6.5	Not Detected
Styrene	6.5	Not Detected
Bromoform	6.5	Not Detected
1,1,2,2-Tetrachioroethane	6.5	Not Detected
cis-1,2-Dichloroethene	6.5	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

· — · · · · · ·		cp .ccp	
Compound	CAS Number	Match Quality	Amount (nG)

None Identified None Identified

B = Compound present in laboratory blank, background subtraction not performed.

Q = Exceeds Quality Control limits.

ID#: 9812153-01A/B

File Name: 9121109 Dil: Factor: 1.3	Date of Collection: 12/9/98

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	115 Q	69-112
Toluene-d8	99 .	72-134
4-Bromofluorobenzene	108	78-119
Dibromofluoromethane	94	70-130
Benzene-d6	74	70-130

SAMPLE NAME : 7706 A&B ID#: 9812153-02A/B Modified VOST 5041A

File Name: 9121106 Date of Collection: 12/ 9/98 Dil. Factor: 1.0 Date of Analysis: 12/11/98	
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10 .	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	28
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	. 5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	10
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	17
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

CAS Number	Match Quality	Amount (nG)
423-38-1	Manual ID	200
75-69-4	90 %	27
124-19-6	74 %	64
	423-38-1 75-69-4	423-38-1 Manual ID 75-69-4 90 %

SAMPLE NAME: 7706 A&B

ID#: 9812153-02A/B

#### Modified VOST 5041A

DIL Factor		Date of Collection: 12/9/98 Date of Analysis: 12/11/98
Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	105	69-112
Toluene-d8	102	72-134
4-Bromofluorobenzene	105	78-119
Dibromofluoromethane	113	70-130



SAMPLE NAME: 7703 A&B

#### ID#: 9812153-03A/B

#### **Modified VOST 5041A**

File Name:		of Collection: 12/9/98 of Analysis: 12/11/98
Dil Factor:		

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	7.3
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	. 5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	5.2
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	60
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### **TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

Compound	CAS Number	Match Quality	Amount (nG)
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	86 %	810
Methane, trichlorofluoro-	75-69-4	90 %	57
Nonanal	124-19-6	72 %	38

Q = Exceeds Quality Control limits.



ID#: 9812153-03A/B

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Dil Factor	10	Date of Collection: 12/ 9/98  Date of Analysis: 12/11/98
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Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	116 Q	69-112
Toluene-d8	97	72-134
4-Bromofluorobenzene	96	78-119
Dibromofluoromethane	119	70-130

SAMPLE NAME: 7708 A&B

ID#: 9812153-04A/B Modified VOST 5041A

File Name: 9121108 Date of Collection: 12/ 9/98 Dil. Factor: Date of Analysis: 12/11/98	
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	- Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	14
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	19
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	9.3
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	2900 E
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	91 %	3500
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	72 %	7800
Methane, trichlorofluoro-	75-69-4	90 %	100
.alphaPinene	80-56-8	96 %	440
Bicyclo[4.1.0]hept-2-ene, 3,7,7-trimethy	554-61-0	· 87 %	360
.betaPinene	127-91-3	94 %	150

SAMPLE NAME: 7708 A&B

ID#: 9812153-04A/B Modified VOST 5041A

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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound

**CAS Number** 

**Match Quality** 

Amount (nG)

E = Exceeds instrument calibration range.

Q = Exceeds Quality Control limits.

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	113 Q	69-112
Toluene-d8	98	72-134
4-Bromofluorobenzene	130 Q	78-119
Dibromofluoromethane	103	70-130

SAMPLE NAME: 7709 A&B ID#: 9812153-05A/B

#### Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10 .	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	14
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	15
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	7.7
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	310
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	87 %	380
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	72 %	920
Methane, trichlorofluoro-	75-69-4	90 %	140
Ethane, 1,2-dichloro-1,1,2-trifluoro-	354-23-4	95 %	36
trans-1-Butyl-2-methylcyclopropane	38851-70-6	93 %	75
3-Cyclohepten-1-one	1121-64-8	91 %	380

SAMPLE NAME: 7709 A&B

ID#: 9812153-05A/B

#### Modified VOST 5041A

9121110 Date	

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported				
Compound	CAS Number	Match Quality	Amount (nG)	
Nonanal	124-19-6	72 %	120	
Octane, 2-chloro-	628-61-5	Manual ID	37	
Pentadecane	629-62-9	87 %	61	

Q = Exceeds Quality Control limits.

Container Type: VOST Tube

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	113 Q	69-112
Toluene-d8	99	72-134
4-Bromofluorobenzene	101	78-119
Dibromofluoromethane	118	70-130

SAMPLE NAME: Lab Blank

ID#: 9812153-06A Modified VOST 5041A

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10 .	25
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	- 5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

Q = Exceeds Quality Control limits.

Container Type: NA

SAMPLE NAME : Lab Blank

ID#: 9812153-06A

#### Modified VOST 5041A

File Name:		Date of Collection: NA
Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	132 Q	69-112
Toluene-d8	91	72-134
4-Bromofluorobenzene	101	78-119
Dibromofluoromethane	120.	70-130

# AIR TOXICS LTD. AN ENVIRONMENTAL ANALYTICAL LABORATORY CHAIN-

180 BLUE RAVINE ROA JUITE B FOLSOM, CA 95630-4719 (916) 985-1000 FAX: (916) 985-1020

Nº 016594

Page  $\perp$  of  $\perp$ 

## CHAIN-OF-CUSTODY RECORD

Company Address	erson Richard Grab US. Army Corps of 215 N. 17th St. (62) 221-7784  By: Signature	t Engineers City Omaha Stat	e NE Zip 68/02	Project Info:  P.O. #  Project #  Project Name Himco Dump  Superfund Site	Turn Aro XI Norma □ Rush		ify
Lab I.D.	Field Sample I.D.	Date & Time	Analy	ses Requested	Caniste Initial	r Pressure / Final	/ Vacuum   Receipt
014/B	7705 A FB	12/9/98 0700	UOST 5641A/	8260 B/TICS	NA	NA	
021/8	7706 A & B	12/9/98 1145	l •.	8260B/TiCs	NA	NH	
034/13	7703 A EB	12/9/98 1332		8260 B/TICS	NIA	N/A	
041/8	7708 A & B	12/9/98 1425	UOST 5041 A	-18260 B/TICS	N/A	N/A	
054/B	7709 AFB	12/9/98 1533	UOST SOYIA	18260 B/TIG	N/A	NA	
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Relinquished By: (Signature) Date/Time Received By: (Signature) Date/Time							
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Only							- 0 0



AN ENVIRONMENTAL ANALYTICAL LABORATORY

#### WORK ORDER #: 9812185

Work Order Summary

CLIENT:

Mr. Steve Peterson

BILL TO: Same

U.S. Army Corps of Engineers 215 N. 17th Street, Zorinsky Bldg.

Omaha, NE 68102-4978

PHONE:

402-221-7183

P.O. # NR

FAX:

402-221-7769

PROJECT # DACW45-99-P-0094 Himco Dump

DATE RECEIVED:

12/11/98

DATE COMPLETED: 12/16/98

FRACTION#	NAME	TEST
01A/B	7712 A&B	VOST 5041A/8260B/TIC's
02A/B	7711 A&B	VOST 5041A/8260B/TIC's
03A/B	7721 A&B	VOST 5041 A/8260B/TIC's
04A/B	7724 A&B	VOST 5041A/8260B/TIC's
05A/B	7719 A&B	VOST 5041A/8260B/TIC's
06A/B	7704 A&B	VOST 5041A/8260B/TIC's
07A/B	7701 A&B	VOST 5041A/8260B/TIC's
08A/B	7710 A&B	VOST 5041A/8260B/TIC's
09A/B	7702 A&B	VOST 5041A/8260B/TIC's
10A	Lab Blank	VOST 5041A/8260B/TIC's

CERTIFIED BY:

Laboratory Director

DATE: /2/17/98

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

#### LABORATORY NARRATIVE

#### Analysis of Volatile Organic Compounds in VOST Cartridges by EPA 5041A/8260B U.S. Army Corps of Engineers Work Order #9812185

Nine Tenax and Tenax/charcoal tube pairs (VOST cartridges) were received on December 11, 1998. The sacrificial temperature check vial was not provided with the shipment, therefore the actual temperature of the shipment was not recorded. The samples were received on ice and therefore their integrity is not in question. The laboratory performed the analysis via EPA SW-846 Method 5041A using GC/MS in the full scan mode. The method involves thermal desorption of the VOST cartridges for 11 min. at 180° C using an inert gas. The gas stream is then bubbled through 5 mL of organic free water and trapped on the sorbent trap of the purge and trap system. The trap is thermally desorbed to elute the components into the GC system for further separation. See the data sheets for the reporting limits for each compound.

Recovery of the surrogate compound 4-Bromofluorobenzene was slightly above the laboratory established limits of 78-119% in sample 7721 A&B and LCS. Re-analysis to confirm matrix effects is not possible for VOST tube samples.

Recovery of the LCS compound Chlorobenzene was 131%, slightly above the advisory QC limits of 70-130%.

Bromomethane was detected in the laboratory blank. The "B" flag was applied to the associated results.

There were no other out of the ordinary circumstances to report.

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
- J Estimated Value.
- E Exceeds instrument calibration range.
- S Saturated Peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- N The identification is based on presumptive evidence.

## 2

## AIR TOXICS LTD.

SAMPLE NAME: 7712 A&B

ID#: 9812185-01A/B

Modified VOST 5041A

File Name: 9121205 Date of Collection: 12/10/98

Dit Factor: 1.0 Date of Analysis: 12/12/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10 .	13 B
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

B = Compound present in laboratory blank, background subtraction not performed.

SAMPLE NAME: 7712 A&B

ID#: 9812185-01A/B Modified VOST 5041A

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File Name: 9 Dil. Factor:	好き システンス・ディー・デー さんじん めいけんはんじんかい	(4) A

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	110	69-112
Toluene-d8	116	72-134
4-Bromofluorobenzene	114	78-119
Dibromofluoromethane	97	70-130

SAMPLE NAME: 7711 A&B

ID#: 9812185-02A/B Modified VOST 5041A

File Name:		
Dil. Factor:	9121206	

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	31
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	6.4
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	8.8
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
1-Hexene	592-41 <b>-</b> 6	94 %	39
3-Cyclohepten-1-one	1121-64-8	87 %	28
Nonanal	124-19-6	72 %	62

SAMPLE NAME: 7711 A&B

ID#: 9812185-02A/B Modified VOST 5041A

File Name: 9121206 Date of Collection: 12/10/9			
Surrogates	% Recovery	Method Limits	
1,2-Dichloroethane-d4	108	69-112	
Toluene-d8	102	72-134	
4-Bromofluorobenzene	103	78-119	
Dibromofluoromethane	108	70-130	

SAMPLE NAME: 7721 A&B

ID#: 9812185-03A/B Modified VOST 5041A

File Name:	
Dil. Factor:	
	Date of Collection: 12/10/98 Date of Analysis: 12/12/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10 ,	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	10
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	17
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	53
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	2400 E
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, trichlorofluoro-	75-69-4	90 %	27
1,4-Cyclohexadiene, 1-methyl-	4313-57-9	91 %	27
.alphaPinene	80-56-8	97 %	14000
Cyclohexene, 3-methyl-6-(1-methylethylid	586-63-0	83 %	480
Cyclohexene, 4-methylene-1-(1-methylethy	99-84-3	91 %	470
.betaPinene	127-91-3	78 %	150

SAMPLE NAME: 7721 A&B

ID#: 9812185-03A/B

Modified VOST 5041A

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The Name:	9121207	Later L	ate of Collection	1:-32/10/98
File Name: Dil. Factor:			2000年12日本中,1920年12日本中	in Marian Carlos Control Control
			ata of Analysias	10/10/00
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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	Match Quality	Amount (nG)	
Limonene	138-86-3	93 %	250
Cineole	470-82-6	93 %	48

E = Exceeds instrument calibration range.

Q = Exceeds Quality Control limits.

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	110	69-112
Toluene-d8	97	72-134
4-Bromofluorobenzene	133 Q	78-119
Dibromofluoromethane	112	70-130

## AIR TOXICS LTD. SAMPLE NAME: 7724 A&B

ID#: 9812185-04A/B Modified VOST 5041A

File Name: Dil. Factor:	9121208 × 1:0	Date of Collection: 12/10/98  Date of Analysis: 12/12/98
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10 .	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	5.9
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	15
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	- 5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	16
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	2000 E
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachioroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, trichlorofluoro-	75-69-4	90 %	34
Cyclohexene, 4-methylene-1-(1-methylethy	99-84-3	93 %	66
Bicyclo[3.1.0]hexane, 4-methyl-1-(1-meth	58037-87-9	86 %	74
.alphaPinene	80-56-8	96 %	4700
Cyclohexene, 3-methyl-6-(1-methylethylid	586-63-0	83 %	3000
.betaPinene	127-91-3	91 %	3000

SAMPLE NAME: 7724 A&B

ID#: 9812185-04A/B

#### Modified VOST 5041A

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TENTATIVE	ELY IDENTIFIED COMPOUNDS - Top 10 Reported		d
Compound	CAS Number	Match Quality	Amount (nG)
.betaMyrcene	123-35-3	86 %	940
Limonene	138-86-3	93 %	1900
Cineole	470-82-6	95 %	450
Camphor	76-22-2	97 %	310
1,3-Benzodioxole, 5-(2-propenyl)-	94-59-7	93 %	18000

E = Exceeds instrument calibration range.

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	112	69-112
Toluene-d8	93	72-134
4-Bromofluorobenzene	119	78-119
Dibromofluoromethane	101	70-130

SAMPLE NAME: 7719 A&B

ID#: 9812185-05A/B Modified VOST 5041A

File Name:	9121209 Date of Collection: 12/10/9	8.
	9121209 Date of Collection: 12/10/9 1.0 Date of Analysis: 12/12/98	2
Dil. Factor:	Date of Analysis: 12/12/96	

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10 .	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	11
Carbon Disulfide	5.0	16
Acetone	50	Not Detected
Methylene Chloride	5.0	32
trans-1,2-Dichloroethene	5.0	56
1,1-Dichloroethane	5.0	92
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chitoroform	5.0	64
1,1,1-Trichloroethane	5.0	200
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	25
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	1700 E
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	55
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	25000 S
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	14
m,p-Xylene	5.0	20
o-Xylene	5.0	8.4
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	170

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	72 %	27000
Methane, trichlorofluoro-	75-69-4	72 %	1400
3-Cyclohepten-1-one	1121-64-8	91 %	280
Heptane, 2,2-dimethyl-	1071-26-7	Manual ID	96
Nonanal	124-19-6	72 %	93
Camphor	76-22-2	97 %	550

ID#: 9812185-05A/B Modified VOST 5041A

SAMPLE NAME: 7719 A&B

File Name: 9121209 Date of Collection: 12/10/98 DIL Factor: 1.0 Date of Analysis: 12/12/98
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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound CAS Number Match Quality		Amount (nG)	
.alphaCubebene	17699-14-8	78 %	220
Decanal	112-31-2	72 %	38
Naphthalene, 1,2,3,4,4a,5,6,8a-octahydro	6813-21-4	86 %	94
1,3-Benzodioxole, 5-(2-propenyl)-	94-59-7	93 %	18000

E = Exceeds instrument calibration range.

S = Saturated peak; data reported as estimated.

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	108	69-112
Toluene-d8	95	72-134
4-Bromofluorobenzene	111	78-119
Dibromofluoromethane	110	70-130

SAMPLE NAME: 7704 A&B

ID#: 9812185-06A/B Modified VOST 5041A

File Name: 9121210 Date of Collection: 12/10/98 Dil. Factor: 1.0 Date of Analysis: 12/12/98	Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Contro	The second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of th	****
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10 .	14 B
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	5.2
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	37
1,1,1-Trichloroethane	5.0	5.8
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	20
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	24
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### **TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

Compound	<b>CAS Number</b>	Match Quality	Amount (nG)
Unknown	NA	NA	31
Nonanal	124-19-6	72 %	99
1H-Cyclopenta[1,3]cyclopropa[1,2]benzene	13744-15-5	Manual ID	120
1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1	93 %	300

B = Compound present in laboratory blank, background subtraction not performed.

SAMPLE NAME: 7701 A&B

ID#: 9812185-07A/B

Modified VOST 5041A

File Name: 912121J	
Dil Factor	
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10 .	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	14
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	5.1
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	16
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	230
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Nonanal	124-19-6	72 %	140
1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1	92 %	150

ID#: 9812185-06A/B

File Name: 9121210 Date of Collection: 12/10/98 Dil. Factor: Date of Analysis: 12/12/98	
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Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	105	69-112
Toluene-d8	112	72-134
4-Bromofluorobenzene	112	78-119
Dibromofluoromethane	102	70-130

SAMPLE NAME: 7701 A&B

ID#: 9812185-07A/B Modified VOST 5041A

File Name: Dil. Factor:		Date of Collection: 12/10/98 Date of Analysis: 12/12/98
Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	104	69-112
Toluene-d8	108	72-134
4-Bromofluorobenzene	105	78-119
Dibromofluoromethane	102	70-130

SAMPLE NAME : 7710 A&B ID#: 9812185-08A/B

Modified VOST 5041A

File Name:	9121212 Date of Collection: 12/10/98
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Dil. Factor:	1.0 Date of Analysis: 12/12/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10 .	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	6.1
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	- 5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	16
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	31
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### **TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

Compound	CAS Number	Match Quality	Amount (nG)
Nonanal	124-19-6	72 %	40
1,3-Benzodioxole, 5-(2-propenyl)-	94-59-7	93 %	69



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## AIR TOXICS LTD.

SAMPLE NAME: 7710 A&B

ID#: 9812185-08A/B

Modified VOST 5041A

File Name: Dil. Factor:		Date of Collection: 12/10/98 Date of Analysis: 12/12/98
Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	100	69-112
Toluene-d8	97	72-134
4-Bromofluorobenzene	99	78-119
Dibromofluoromethane	112	70-130

SAMPLE NAME : 7702 A&B
ID#: 9812185-09A/B
Modified VOST 5041A

File Name:	9121213 Date	of Collection: 12/10/98
Dil. Factor:	2-1.0, Date	of Analysis: 12/12/98
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	13
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	59
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	24
1,1,1-Trichloroethane	5.0	2300 E
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	36
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	9.6
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	28
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, trichlorofluoro-	75-69-4	90 %	160
Nonanal	124-19-6	72 %	86
1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1	93 %	54

E = Exceeds instrument calibration range.

ID#: 9812185-09A/B

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	107	69-112
Toluene-d8	98 .	72-134
4-Bromofluorobenzene	100	78-119
Dibromofluoromethane	103	70-130

SAMPLE NAME : Lab Blank

ID#: 9812185-10A Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10 .	20
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

Container Type: NA

SAMPLE NAME: Lab Blank

#### ID#: 9812185-10A

#### Modified VOST 5041A

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Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	111	69-112
Toluene-d8	100	72-134
4-Bromofluorobenzene	108	78-119
Dibromofluoromethane	107	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

180 BLUE RAVINE ROAD. SUITE B FOLSOM, CA 95630-4719 (916) 985-1000 FAX: (916) 985-1020

Nº 016617

Page L of L

#### **CHAIN-OF-CUSTODY RECORD** Kichard Grabowski **Turn Around Time:** Project info: Company US Army Corps of Engineers P.O. # Normal Address 215 N. 17% St. City Omaha State NE Zip 68102 ☐ Rush Project # \_\_\_\_ Project Namething Dump Specify Phone (402) 221-7784 FAX (402) 221-7769 Collected By: Signature Kichard Gullard: Superfund Site Canister Pressure / Vacuum Lab Field Sample I.D. Date & Time **Analyses Requested** 1D Initial Final Receipt W/A 011/13 7712 AER 12/10/98 0700 UOST 5041 A/8260B/TICS 024/13 12/10/48 6855 N/A A&B UOST SO41 A/ 8260 B/ TICS NA 12/10/98 0953 VOST 5041 A/ 8260 B/ TICS 044/A 7724 VOST SO41 A 8260 B/TIG N/A 12/10/98 1008 NA USA1B NA 1122 7719 AFB 12/10/98 USST SULLA/8260 B/TICS NA VOST SOYIA/8260B/TICS NA 12/10/98 1218 061/8 7701 AEB C74/B 12/16/98 1410 VOST 5041 A/82608/TICS NIA WX 08A/B VOST 5041A/8260B/TICS 7716 AEB 1503 090/B 7702 A EB UST 5041A/8260 B/TICS NIW 1622 Refinquished By: Mignan (e) Dile/Time Notes: RICHARD J. GRABOUSK Relinquished By: (Signature) Date/Time Received By: (Signature) Date/Time Relinquished By: (Signature) Date/Time Received By: (Signature) Date/Time Air Bill # Opened By Date/Time Temp. (°C) **Custody Seals Intact?** Shipper Name Work Order # Condition A Lab Yes No None N/A 809200473691 Use Only

#### WORK ORDER #: 9812208

Work Order Summary

**CLIENT:** 

Mr. Steve Peterson

BILL TO: Same

TEST VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's VOST 5041A/8260B/TIC's

U.S. Army Corps of Engineers

215 N. 17th Street, Zorinsky Bldg.

Omaha, NE 68102-4978

PHONE:

402-221-7183

FAX:

402-221-7769

DATE RECEIVED:

12/12/98

DATE COMPLETED:

12/21/98

FRACTION #	NAME
01A/B	7715 A&B
02A/B	7720 A&B
03A/B	7707 A&B
04A/B	7718 A&B
05A/B	7717 A&B
06A/B	7714 A&B
07A	Lab Blank

P.O. # NR
PROJECT # DACW45-99-P-0094 Himco Dump

CERTIFIED BY: Laboratory Director

DATE: 12/21/98

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

#### LABORATORY NARRATIVE

#### Analysis of Volatile Organic Compounds in VOST Cartridges by EPA 5041A/8260B U.S. Army Corps of Engineers Work Order #9812208

Six Tenax and Tenax/charcoal tube pairs (VOST cartridges) were received on December 12, 1998. The sacrificial temperature check vial was not provided with the shipment, therefore the actual temperature of the shipment was not recorded. The samples were received on ice and therefore their integrity is not in question. The laboratory performed the analysis via EPA SW-846 Method 5041A using GC/MS in the full scan mode. The method involves thermal desorption of the VOST cartridges for 11 min. at 180° C using an inert gas. The gas stream is then bubbled through 5 mL of organic free water and trapped on the sorbent trap of the purge and trap system. The trap is thermally desorbed to elute the components into the GC system for further separation. See the data sheets for the reporting limits for each compound.

Bromomethane was detected in the laboratory blank. The "B" flag was applied to the associated results.

Recovery of the surrogate compound 1,2-Dichloroethane-d4 was slightly above the laboratory established limits of 69-112% in samples 7714 A&B and 7720 A&B. Recovery of the surrogate compound 4-Bromofluorobenzene was above the laboratory established limits of 78-119% in sample 7714 A&B, possibly due to matrix effect. Re-analysis to confirm matrix effects is not possible for VOST tube samples.

There were no other out of the ordinary circumstances to report.

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
- J Estimated Value.
- E Exceeds instrument calibration range.
- S Saturated Peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- N The identification is based on presumptive evidence.

SAMPLE NAME: 7715 A&B

ID#: 9812208-01A/B Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0 ·	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

**Container Type: VOST Tube** 

Table 2-4
Summary of Soil Gas Ambient Air and Equipment Blank Results - October 1999
HIMCO Dump Superfund Site
Elkhart, Indiana

Sample Location	TT-71	TT-71	<b>T</b> T-96	TT-96
Sample Description	Ambient Air Blank	Equipment Blank	Ambient Blank	Equipment Blank
Analyte As [	μg/m³ 🗼	i μg/m³	μg/m³	μg/m³···
Chloromethane	ND	ND	ND	0.67
Freon 11	0.52	0.71	1.16	1.28
Carbon Disulfide	ND	0.58	ND	1.43
Acetone	ND	ND	ND	3.52
Methylene Chloride	ND	ND	0.63	0.86
Carbon Tetrachloride	0.43	0.50	0.53	0.52
Benzene	ND	ND	0.77	0.71
Toluene	ND	0.50	2.75	2.47
m,p-Xylene	ND	ND	1.16	0.81
Styrene	ND	ND	1.69	1.00

Table 2-3 Ground Water Equipment Blank and Decon Source Water Blank Summary - April/May 2000 HIMCO Dump Superfund Site Elkhart, Indiana

Sample location	WT102C Equipment Blank	WT114A Equipment Blank	Source Water Sample	Equipment Blank
Sample number	EDPNO/S017	EECFP1/SO58	EOOFG/SO44	2001SK01R01
Date sampled	4/25/2000	5/3/2000	5/1/2000	5/1/2000
Units	μg/L	ug/L	μα/L 1919	μg/L έντε
TOTAL METALS				
Aluminum	118 U	118 U	118 U	40 U
Antimony	2 U	7 U	7 U	4 U
Arsenic	2 U	7 U	7 U	2 U
Barium	2.6 ∪	0.81	3 U	2 U
Beryllium	2 U	2 U	2 U	0.3 U
Cadmium	0.1 U	0.3 U	0.3 U	0.3 U
Calcium	648		64 U	53.1 J
Chromium	6.7 U	6.7 ป	6.7 U	3.0 U
Cobalt	13.2 U	13.2 U	13.2 U	I U
Соррег	· 3 JB	9.3 U	9.3 U	$\mathbb{P}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1, \mathcal{C}_{\sigma_1$
Iron	32.5 JB	34.1.1	46.5 U	431
Lead .	2.00 U	7 U	7.00 U	2.0 U
Magnesium	1974 - 120	21.9 J	3.9 J	List J
Manganese		0.8 J	1.9 U	2 U
Mercury	0.10 U	0.10 UJ	0.10 U	0.5 U
Nickel	21 U	21 U	21 U	1.2 ]
Potassium	87.4 U	69.9 ]	217 U	219 )
Selenium	2 U	7 U	7 U	4 U
Silver	11.1 U	11.1 U	11.1 U	i U
Sodium	4160	364 325 255	37.5 U	212 J
Thallium	l U	4 U	1 U	2 U
Vanadium	5.1 U	5.1 ບ	5.1 ປ	431
Zinc	. 5.20至34.LTC可能是A.对第二	34.1 U	34.1 U	25 U
Misc Inorganics				
cyanide	NATA SEE	NA	NA	8 U
bromide	I NA L	NA NA	NA	40.1
chloride	NA .	NA	NA	96500 1
sulfate	NA NA	- NA	NA	79300 J
VOLATILE ORGANICS	1			
1,2-dichloroethane	1.0	1 U	เช	Carlos La La Carlos Maria
Acetone	43	5 U	5 U	5 U
Chloroform	15 15 - 15 - 15	10	ιυ	1 U
2-Butanone		5 U	5 U	5 U
Bromodichloromethane	6 6	ιυ	1 U	IU
Dibromochloromethane	3	1 U	I U	1 U
SEMIVOLATILE ORGANICS			,	4.144.00.30.30.30.00.00
di-n-butylphthalate	5 U	5 U	5 U	NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE: NOTE:
bis(2-Ethylhexyl)phthalate	5 (1	5 U	12 Table 1933	3 1

<sup>-</sup>Detected constituents have been shaded.

J: The reported value is estimated.

U: The analyte was not detected at the stated value.

Table 2-2 Relative Percent Difference of Soil Gas Duplicate Samples - October 1999 HIMCO Dump Superfund Site Elkhart, Indiana

Sample Location	aratia.	TT-56		gironia, Galactica	TT-95		- Irisani	TT-97	
Y		***							
Units: mg/m	1								
And a second	Result	Result	RPD	Result	Result	RPD	Result	Result	RPD
Analyte	<u> </u>				a and a great great and a	V 400 1 V 324 V 3	, <u> </u>		
Vinyl Acetate	<	<	0	<	<	0	<	<	0
2-Butanone	<	<	0	<	<	0	<	<	0
Chloroform	110	<	NC	<	<	0	<	<	0
1,1,1-Trichloroethane	<	<	0	<	<	0	<	<	0
Carbon Tetrachloride	<	<	0	<	<	0	<	<	0
Benzene	380	<	NC	<	<	0	<	<	0
1,2-Dichloroethane	<	<	0	<	<	0	<	<	0
Trichloroethene	6600	14000	72	<	<	0	<	<	0
1,2-Dichloropropane	<	<	0	<	<	0	<	<	0
Bromodichloromethane	<	<	0	<	<	0	<	<	0
trans-1,3-Dichloropropene	<	<	0	<	<	0	<	<	0
4-Methyl-2-pentanone	<	<	0	<	<	0	<	<	0
Toluene	2800	6800	83	0.83	0.48	53	<	<	0
cis-1,3-Dichloropropene	<	<	0	<	<	0	<	<	0
1,1,2-Trichloroethane	<	<	0	<	<	0	<	<	0
Tetrachloroethene	6000	34884	141	1.3	1.6	21	0.82	0.69	17
2-Hexanone	<	<	0	<	<	0	<	<	0
Dibromochloromethane	<	<	0	<	<	0	<	<	0
Chlorobenzene	<	<	0	<	<	0	<	<	0
Ethyl Benzene	1400	6400	128	<	<	0	<	<	0
m,p-Xylene	900	4500	133	<	<	0	<	<	0
o-Xylene	270	980	114	<	<	0	<	<	0
Styrene	90	<	NC	<	<	0	<	<	0
Bromoform	<	<	0	<	<	0	<	<	0
1,1,2,2-Tetrachloroethane	<	<	0	<	<	0	<	<	0
1,3-Dichlorobenzene	<	<	0	<	<	0	<	<	0
1,4-Dichlorobenzene	50	<	NC	<	<	0	<	<	0
1,2-Dichlorobenzene	3.4	<	NC	<	<	0	<	<	0
cis-1,2-Dichloroethene	4200	2200	63	<	<	0	<	<	0

NC: Not calculated because one of the samples from the duplicate pair was nondetect while the compound was detected in the duplicate.

Table 2-1
Relative Percent Differences in Ground Water Duplicate Samples - March/April 2000
HIMCO Dump Superfund Site
Elkhart, Indiana

		287 Westwood 3/16/2000	14	2 ( T. 10 ) Y. W. ( S. 1 ) S. ( )	305 Westwood			VT101A	() in		WT112B			VT116A		\$	05 Westwoo	<b>d</b> ; ; ; ; ;
Date Sampled Sample number	Siz	3/16/2000 R12		SOIO	4/18/2000 SO11		S050	/3/2000 S051		S033	4/27/2000 \$034		8053	5/3/2000 S054		S02	1/15/2000 D02	
	Result	Result	RPD	Result	Résult	RPD	Result	Result	RPD	Result	Result	RPD	Result	Result	RPD	Result	Result	RPD
TOTAL METALS (mg/L)					<u> </u>			· · · · · · · · · · · · · · · · · · ·									2461	<del></del>
Aluminum	<	<	0	<	<	0	<	<	0	<	<	0	<	<	0	58.2	53.7	8.0
Arsenic	7	8	13	<	<	0	5	<	NC	5	4	22	<	<	0	<	<	0
Barium	63.8	64.5	1	76.6	63.2	19	83.1	82.4	1	86.7	86	1	79.9	79.6	0 4	46.9	47.4	1.1
Beryllium	<	<	0	<	<	0	<	<	0	<	<	0	0.1	<	NC	0.3	0.1	100
Calcium	93300	92300	1	205000	173000	17	258000	242000	6	81800	79900	2	666000	685000	3	129000	129000	0
Cobalt	10.5	<	NC	<	<	0	<	4	NC	<	<	0	<	11.5	NC	0.8	0.9	12
Copper	7.3	<	NC	15.2	10.7	35	<	<	0	<	<	0	15.8	15.5	2	1	1.4	33
Iron	5050	5030	0 4	2790	2270	21	16300	16100	1	1180	1220	3	31900	32400	2	1840	1720	7
Lead	<	<	0	2	2	0	<	<	0	<	<	0	6	13	74	<	<	0
Magnesium	21500	22000	2	21700	18200	18	27300	27500	1	21000	20900	0.5	66900	66100	1	14200	14200	0
Manganese	63.1	59.6	6	1880	1560	19	1610	1540	4	93.1	94.5	1	1810	1800	1	1250	1250	0
Nickel	<	<	0	<	<	0	<	<	0	<	<	0	<	<	0	3.4	3.6	6
Potassium	1150	1160	1	6920	5170	29	6730	6810	1	1320	1380	4	19600	18900	4	4400	4670	6
Vanadium	<	<	0	<	<	, 0	<	<	0	<	<	0	. <	<	0	4.9	3.4	. 36
Sodium	14900	14700	1	92200	73400	23	<	65200	NC	22800	23300	2	161000	160000	1	42300	42700	1
Zinc	18.9	14.2	28	39.1	26.9	37	<	<	0	<	<	0	178	194	9	14.3	20.3	€₫.35
MISC. INORGANICS																		
Bromide (µg Br /L)	NS	NS	NC	70	70	0	520	530	2	70	70	0	2380	2420	2	NS	NS	NC
Sulfate (mg SO <sub>4</sub> /L)	NS	NS	NC	152	152	0	218	215	1	56	56	0	1260	1250	1	NS	NS	NC
VOLATILE ORGANICS (μg/L)																		
Ethyl ether	NA	NA		NA	NA		NA	NA		NA	NA		NA	NA		26	31	18
Dichlorofluoromethae	NA	NA		NA	NA	1	NA	NA		NA	NA	į.	NA	NA		5	6	18
Vinyl Chloride	<	<	0	<	<	0	<	<	0	<	<	0	1	1	0	<	<	0
Chloroethane	<	<	0	<	<	0	<	2	NC	<	<	0	1	1	0	<	<	0
1,1-Dichloroethane	7	7	0	3	4	29	8	8	0	<	<	0	<	7	NC	4	4	0
cis-1,2-Dichloroethene	0.5	0.5	0	2	2	0	<	<	0	<	<	0	1	1	0	2	3	40
trans-1,2-Dichloroethene	<	<	0	<	<	0	<	<	0	<	<	0	ı	<	NC	<	<	0
1,2-Dichloroethane	0.7	<	NC	<	<	0	<	<	0	<	<	0	<	<	0	1	1	0
1,2-Dichloropropane	<	<	0	8	9	12	<	<	0	<	<	0	<	1	NC	8	8	0
cis-1,3-Dichloropropene	<	<	0	<	<	0	<	<	0	<	<	0	1	<	NC	<	<	0
Benzene	0.4	0.4	0	<		0	2	2	0	<	<	- 0	<	<	0	<	<<	0
SEMIVOLATILE ORGANICS (µg/L)													_					
Phenoi	<	<	0	<	<	0	<	<	0	<	<	0	5	<	NC	<	<	0
Diethylphthalate	<	<	0	<	<	0	3	4	29	<	<	0	<	4	NC	<	<	0
Di-n-butylphthalate	<	<	0	<	<	0	<	<	, 0	<	<	0	<	<	0	<	14	NC
bis(2-Ethylhexyl)phthalate	<	<	0	<	<	0	8	4	67	<	<	0	<	2	NC	3	3	0
Di-n-octylphthalate	<	<	0	<<	<	0	<	<	0	<	<	0	5	<	NC	<	<	0

<sup>&</sup>lt;: Not detected NC: Not calculated. NA: Not Analyzed. Shading: RPD is greater than 20%

# Quality Control Summary Tables 1999 Soil Gas and 2000 Ground Water Analytical Results

Sample 11020 (location TT-84) was lost during analysis when the mass spectrometer filament broke.

Date: January 2002

Cartridge 11021A (TT-61) was analyzed with cartridge 11009B (TT-54) while 11009A (TT-54) and 11021B (TT-61) were analyzed independently. The contaminants detected in the pair 11021A/11009B can likely be attributed to location TT-61. The rationale behind this reasoning lies in the sample collection method. During collection, the soil gas was drawn through sorbent tube "A" before passing through tube "B". At those locations with high concentrations tube "A" would saturate with the residual passing to sorbent tube "B". The sorbent tube from location TT-54 demonstrated only a trace of toluene and carbon disulfide. All other compounds were nondetect. If the levels reported in the pair 11021A/11009B were from location TT-54 the concentrations in the analysis of sorbent tube "A" from that location would have been higher than observed in the pair which contained the residual portion of the sampling. Further supporting this is the concentration of residual tetrachloroethene reported in sorbent tube 11021B (TT-61). Similar relationships are noted among the other contaminants reported. The impact to the data is in the estimation of the concentration detected and not the presence or absence. The corresponding detections have been qualified "J".

Concentrations That Exceed The Calibration Range - The following sample locations contain target analytes at concentrations that exceed the calibration range or saturated the detector. The nature of the matrix combined with the collection and analysis method does not provide for reanalysis of these samples. All applicable results have been qualified "E".

TT-56, TT-62, TT-63, and TT-64

#### 4.0 Conclusions

#### 4.1 Data Adequacy

The data met the data quality objectives for precision, accuracy, representativeness, comparability and completeness and is adequate for the intended. Review of the sample handling and analysis shows that the sample quality has not been negatively impacted by field or lab procedures. Qualifiers have been applied to the results to convey limitations of the analytical results. There are a few instances where data is unusable and those are qualified as rejected "R".

#### 4.2. Restrictions on Data Use

There are no restrictions on the data use.

No target analytes or TICs were detected in the method blanks.

#### 3.2.4 Surrogate and Internal Standard Recoveries

- Sample 11003A&B (location TT-56) had high recoveries for three surrogates and a low recovery for one surrogate. The three internal standards were also out of control on the low side. All detections have been qualified "J" while the nondetections have been qualified "UJ".
- Sample 11107A&B (TT-62) toluene-d8 and 4-bromofluorobenzene surrogate recoveries and chlorobenzene-d5 internal standard recovery were outside QC criteria. All detections have been qualified "J" while the nondetections have been qualified "UJ".
- In sample 11225A&B (TT-78) the recovery of bromofluorobenzene was high. All detections in this sample have been qualified "J".
- In sample 11210A&B (TT-79) the internal standard 1,4-Dichlorobenzene-d4 was out of control low. All detections have been qualified "J" while the nondetections have been qualified "UJ".
- In sample 11215A&B (TT-86) the chlorobenzene-d5 and 1,4-dichlorobenzene-d4 internal standards are low out of control. All detections have been qualified "J" while the nondetections have been qualified "UJ".
- The area for internal standard 1,4-Dichlorobenzene was out of control low in samples 11310A&B (TT-97) and 11208A&B. The area of chlorobenzene-d5 and fluorobenzene in sample 11208A&B was also out of control low. All detections have been qualified "J" while the nondetections have been qualified "UJ".
- The recovery of 1,2-dichloroethane-d4 was out of control high in samples 11316A&B and 11313A&B (TT-89).

#### 3.2.5 Matrix Spike/Matrix Spike Duplicates

Due to nature of volatile organic sampling train cartridges it is impossible to spike the samples.

#### 3.2.6 Additional Soil Vapor Analysis Information

The laboratory correctly reported all analyte concentrations in units of nanograms per sorbent tube analyzed. For some samples the lab also reported the concentrations in  $\mu g/m^3$ . These values are unusuable and should be disregarded. The units of  $\mu g/m^3$  that appear in the report tables have been calculated using the nanogram value from the laboratory and the volume of the sample collected as measured in the field and are valid for use.

high due to contamination in the preparation blank of 42.2  $\mu$ g/L. The data has been qualified "BJ".

Date: January 2002

- -The beryllium results for 2001SK01S01 through 2001SK01S04 and 2001SK01D02 are considered estimated and biased high due to contamination from the laboroaty preparation blank.
- -The sodium result is considered estimated and biased high due to contamination form the laboratory preparation blanks.
- -The vanadium and nickel detected results in are considered estimated and biased high due to contamination in the laboratory preparations blank

#### 3.1.4 Laboratory Duplicates

No problems are noted.

#### 3.1.5 Internal Standard and Surrogate Recoveries

No problems are noted.

#### 3.2 Soil Vapor

This section presents a overview of the data validation performed by US EPA-Region 5 contractors using the National Functional Guidelines for Organic Data Review. The data is usable as noted here. Complete details can be found in the validation narratives provided in this appendix.

#### 3.2.1 Instrument Calibration

There are numerous compounds with initial and/or continuing calibration RSD outside criteria. Most of the outliers are minor and resulted in the estimation of data. The effected compounds have been qualified "J" for detected compounds and "UJ" for the undetected compounds. See Appendix I-2 for specific details. In those instances where the exceedance was considerably outside criteria, the data was determined unusable and those analytes have been qualified "R" (rejected) and are discussed here.

• The bromomethane result for samples TT-69 and TT-73 are unusable.

#### 3.2.2 Laboratory Control Samples

No problems were noted.

#### 3.2.3 Method Blanks

**Pesticides and PCBs** -The November 2000 sample set was analyzed for pesticides and PCBs and all samples were reported as nondetect. The reporting limits for for 2001SK01S01, 2001SK01S03 and 2001SK01S04 are considered estimated and biased low due to LCS recover. Several compound reporting limits for this sample delivery group are also estimated and biased low due to low recovery of the control check sample. The matrix spike and spike duplicate recoveries for a few pesticides were high outside control limits. Since the samples were nondetect the data is not qualified.

Date: January 2002

**Metals** - The mercury results for 2000SY04S01 through S13 are considered estimated and biased slightly high due to matrix spike (MS) recovery of 127.2% and high laboratory control sample (LCS) recovery of 124.3%. No qualification of the data was necessary since mercury was not detected in any of the associated field samples.

-The sodium results for 2000SY04S01 through S13 are considered estimated and biased low due to low MS recovery of 60.77%. The associated data has been qualified "J".

**General Chemistry** - The possible effect of matrix in the analysis of bromide and sulfate could not be determined because the laboratory tested duplicate samples instead of matrix spike duplicates. It was noted in validation that this was due to mingling of SW-846 and CLP methods.

-The sulfate results for 2000SY04S14 through S39 are considered estimated and biased low due to low laboratory fortified blank recovery of 66.5%.

#### 3.1.3 Method Blanks

**Volatiles -** Methylene chloride was detected in the method blank associated with sample delivery group EDCJ8 (March 2000 sampling event) at 0.7  $\mu$ g/L. No samples were impacted.

**Semivolatiles** - Butylbenzylphthalate was detected in the method blank associated with sample delivery group EDCJ8 (March 2000 sampling event) at 3  $\mu$ g/L. No samples were impacted.

**Metals** - No serious blank problems were noted. Where calibration or preparation blanks contain low concentrations of analytes above the instrument detection limit the sample results are qualified "J" for the detections. No qualification is necessary for the nondetections.

-The calcium results for 2000SY01S01 through S14 and R12 are considered estimated and biased high due to contamination of 158  $\mu$ g/L in the preparation blank. The corresponding data has been qualified "BJ".

- The iron results for 2000SY04S14 through S39 are considered estimated and biased slightly

- The magnesium results for 2000SY04S31 through S39 are considered estimated and biased high due to CCV recovery of 111.44%. The data has been qualified "J".

Date: January 2002

- -The nickel results for 2000SY04S14 through S39 are considered estimated and biased slightly high due to ICV recovery of 111.68% and CCV recoveries of 111.15%, 110.76%, and 114.01%. The nondetect data has been qualified "UJ" while the detected concentrations are qualified "J".
- -The 2001SK01S02, -S03, and -S04 arsenic results and the -S03 lead results from the November 2000 sampling event are considered estimated and biased slightlyly high due to CCV recovery of 111.7% and 110.9% respectively. Note also that -S02, and -S03 are reported diluted and not detected, yet at a value above the detection limit.
- -The 2001SK01S01 through -S04 and -D02 thallium results from the November 2000 sampling event are considered estimated and biased slightly high due to CCV recovery of 118.3%. Note also that these samples and 2001SK01D02 are reported diluted and not detected, yet at a value above the detection limit.

**General Chemistry** - Sulfate results for 2000SY04S44, S49, and S58 are considered estimated due to a low calibration coefficient of 0.992.

#### 3.1.2 Laboratory Control Samples/Matrix Spike/Spike Duplicates

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**Volatiles** -Laboratory control samples identified as VLCS54 and VLCS55 were used in place of a MS/MSD samples for the low concentration analysis of samples from Sample Delivery Group EDPK9. All spike recoveries were within limits.

-The 1,2-dichloroethane detected results for the November 2000 samples are considered estimated and biased high due to out-of-control matrix spike duplicated recovery of 113%. Several other recoveries are biased high out-of-control, but the sample results are nondetect so no qualification is necessary.

Semivolatiles -Laboratory control sample identified as SLCS60 was used in place of a MS/MSD sample for the low concentration analysis of samples from Sample Delivery Group EDPK9. All spike recoveries were within limits.

-The di-n-butylphthalate results are estimated due to low LCS recovery in the November 2000 data set.

Hexachlorocyclopentadiene, 2,4-Dinitrophenol, 4-nitrophenol, and 4,6-Dinitro-2-methylphenol was noted for Sample Delivery Group E00FL. These analytes have been qualified "UJ" in the accompanying samples.

- Continuing calibration RSD outside criteria for 2,4-Dinitrophenol and 4-nitrophenol was noted for Sample Delivery Group EDCF6. These analytes have been qualified "UJ" in the accompanying samples.
- -The tentatively identified compound results for the November 2000 sampling event are estimated due to lack of intrument calibration.

#### Metals

- -The chromium and zinc results for April/May 2000 samples 2000SY04S40 through S58 are estimated biased slightly high due to continuing calibration verification (CCV) recovery of 110.64% for chromium and 113.22% and 111.19 % for zinc. The data are usable and the detections have been qualified "J".
- -The cobalt results for April 2000 samples 2000SY04S01 through S13 are considered estimated and biased slightly high due to initial calibration verification (ICV) recovery of 110.99% and CCV recovery of 110.52%. The data was qualified "UJ" since cobalt was not detected in any of the associated field samples.
- -The CCV recovery of 112% for selenium associated with 2000SY04S54 is considered biased slightly high. The nondetect result has been qualified "UJ".
- -The iron results for 2000SY04S01 through S13 are considered estimated and biased slightly high due to CCV recovery of 110.94%. The data has been qualified "J".
- -The chromium and cobalt results for 2000SY01S01 through S14 and R12 are considered estimated and biased high due to high CCV recoveries of 112.35%, 112.96%, and 112.96% for chromium and 115.4% for cobalt. The nondetect results have been qualified "UJ" based on the CCV. The data reported as detected as been qualified "J".
- -The chromium and cobalt results for 2000SY04S31 through S39 are considered estimated and biased slightly high due to high CCV recoveries of 112.63% for chromium and 110.74% for cobalt. The nondetect results have been qualified "UJ" based on the CCV. The data reported as detected as been qualified "J".

- Date: January 2002
- -Sample Delivery Group EDPK9 (April 2000 residential well sampling) had percent differences between initial and continuing calibration greater than 20% for a few poor performers associated with samples EDPL7 through L9, EDPM0 through M2, EDPM4, and EDPM5. However, the differences were within the 30% criteria allowed by the low level volatile method. None of these compounds were present in the site samples, therefore the data has been qualified "UJ". The specific compounds are chloromethane, bromoform, 1,2-Dibromo-3-chloropropane.
- -Continuing calibration RSD for bromoform of 25.4% and 29.1% was noted in Sample Delivery Groups EDCG0 and EDCF6 respectively. This analyte was not detected in the associated samples, therefore the data was qualified "UJ".
- -Continuing calibration RSD for 1,1-Dichloroethene, 2-Butanone, cis-1,2-Dichloropropene, 2-Hexanone, 1,2-Dibromo-3-chloropropane, and 1,2,4-Trichlorobenzene were also just outside criteria with differences ranging from 25.4% to 34.1%. The accompanying data in Sample Delivery Group E00FL has been qualified "UJ" as none of these analytes were detected.
- -Continuing calibration RSD for acetone, 2-Butanone, 4-Methyl -2-Pentanone, and 2-Hexanone were outside criteria and the associated samples in Sample Delivery Group E00FL have been qualified "UJ" as none of these analytes were detected.
- -Note that all of the 2-chloroethyl vinyl ether results from the November 2000 event were rejected by the laboratory due to the lack of calibration standard solutions.

#### **Semivolatiles Organic Compounds**

- Continuing calibration whose corresponding initial calibration has percent relative standard deviations outside primary criteria and continuing calibration with percent difference outside criteria of 20% are noted for a few semivolatile compounds in Sample Delivery Group EDCJ8. The associated samples have been qualified "UJ" since these compound were not detected: 3-Nitroaniline, 2,4,-Dinitrophenol, 4-Nitrophenol, and 2,4-Dinitrotoluene.
- Continuing calibration RSD outside criteria for the compounds 4-chloroanailine, 2,4-Dinitrophenol, 4-nitrophenol, and 3,3'-Dichlorobenzidine was noted for Sample Delivery Group EDCG0. These analytes have been qualified "UJ" in the accompanying samples.
- Continuing calibration RSD outside criteria for the compounds phenol, bis)2-chloroethyl)Ether, 2,2'-Oxybis(1-chloro-propane), 4-chloroanailine, Hexachlorobutadiene,

• Water Samples for Volatile Analysis - All water samples were properly preserved with hydrochloric acid to a pH of less than two.

#### 2.3.4. Holding Times

Holding times were met for the extraction and/or analysis of all ground water and soil vapor samples except as noted here.

 Mercury samples S40-S58 from sample delivery group 20000SY04 were analyzed outside the required holding time of 28 days and the results are considered estimated.
 No mercury was reported, however, the nondetect samples have been qualified UJ.

#### 3 Laboratory Control

This section presents an overview of the results of the data validation from the laboratory perspective. The March, April, and May 2000 organic analytical data was validated by US EPA-Region 5 contractors using the National Functional Guidelines for Organic Data Review while the November 2000 organic data was validated by Indiana Department of Environmental Management (IDEM). The inorganic analytical data was validated by the Indiana Department of Environmental Management according to the quality criteria contained in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, Third Edition, Final Updates 1, 2, 2a, 3, along with the EPA Drinking Water Standards, 1996. The data is generally acceptable for use and only deviations are noted below. Complete details can be found in the validation narratives included in this appendix with the laboratory reports and Form I's.

#### 3.1 Ground Water

#### 3.1.1 Instrument Calibration

#### **Volatiles Organic Compounds**

-Sample Delivery Group EDCJ8 (March 2000 residential well sampling). There are numerous instances of continuing calibration whose corresponding initial calibration has percent relative standard deviations (RSD) outside primary criteria and continuing calibration with percent difference outside criteria of 20%. The associated samples have been qualified "UJ" for these compounds which were not detected: chloromethane, vinyl chloride, carbon disulfide, 1,1,-Dichloroethane, 1,2,-Dichloroethane, 2-Butanone, bromochloromethane, cis-1,3,-Dichloropropene, trans-1,3,-Dichloropropene, 4-methyl-2-pentanone, 2-Hexanone, toluene, and 1,2-Dibromo-3-chloropropane.

All others were reported as not having detectable levels of the target compounds. The samples that contain an analyte, that is also present in a trip blank are qualified "B" unless the amount present is less than ten times the blank concentration for the common laboratory contaminants or five times the amount present in the blank for all other analytes. If the amount present in the sample is less than ten times the amount present in the blank for the common laboratory contaminants, or five times the amount present in the blank for any other analyte, the result is qualified "UB". The ground water trip blanks are summarized in Table 2-5 and the soil gas trip blanks are summarized in Table 2-6.

- Ground Water Every trip blank except one, sample EDPL9 from 17 April 2000, contained low levels of methylene chloride. The lack of this compound in the field samples along with consistent levels between 0.6 and 5 μg/L may indicate that the water used to prepare the blanks was contaminated with methylene chloride. Trip blank EDCH0, 26 April 2000, contained carbon disulfide at 2 J μg/L and acetone at 0.8 J μg/L. The field samples shipped with this blank did not contain these compounds. No data is qualified based on the results of the trip blanks.
- **Soil Vapor** -The trip blank associated with locations sampled 10/22/1999 contained 34 ng of methylene chloride. There is no impact to the sample set since no methylene chloride was detected in the associated samples.

-The trip blank associated with locations sampled on 10/20/1999 contained 13 ng of bromomethane and 140 ng of chloromethane. There is no impact to the sample set since no methylene chloride or bromomethane was detected.

-The trip blank associated with locations sampled on 10/26/1999 contained methylene chloride at 11 ng. The impact to the samples based on the blank is the qualification of samples 11223A&B (TT-80) and 11225A&B (TT-78) as nondetect based on the National Functional Guideline that less than 10x the blank of a common lab contaminant is not considered site related.

#### 2.3.3. Sample Preservation

All samples were shipped in coolers that contained sufficient ice to maintain an internal temperature of 4 degrees C.

• Water Samples for Metals - The water samples were properly preserved with nitric acid.

Benzene, toluene, xylenes, styrene, and methylene chloride were present in the field blank collected at location TT-96 but not at location TT-71. The presence of these compounds indicates a potential source of these volatiles on site not necessarily associated with the subsurface soil vapor.

The equipment blanks were collected after the field blanks by drawing ambient air through a decontaminated sample collection assembly. Freon 11 and carbon tetrachloride were detected in both equipment blanks at concentrations comparable to the field blanks. Benzene, toluene, xylenes, styrene, and methylene chloride were detected in the equipment blank collected at location TT-96 but not at location TT-71. These concentrations are similar to the field blank from this location. The comparable concentrations of the equipment blanks to the field blanks argue that the source of these contaminants is attributable to the ambient air and not the decontamination process.

#### 2.3 Sample Handling and Preservation

This section describes the impact to sample integrity due to handling from the time of collection until analysis. The preservation of samples, length of time in shipment, exposure of samples to environments other than the site and laboratory, and elapsed time between sampling and analysis all have the potential to impact samples.

#### 2.3.1 Chain of Custody and Cooler Receipt

- **Ground Water** No sample custody or cooler receipt problems were noted for the ground water samples.
- Soil Vapor Samples Cartridges 11214A and 11214B were shipped in each other's containers. The laboratory analyzed the samples in the proper sequence. Since the cartridges were from the same location and analyzed correctly the data is not adversely impacted.

#### 2.3.2. Trip Blanks

Trip blanks accompanied every ground water and soil vapor sample submitted for analysis. The ground water trip blanks were prepared by the lab from analyte free water and shipped to the site with the clean sample containers. These blanks were then included with each cooler that contained water samples for volatile analysis.

For the soil gas samples, an unopened sorbent tube was placed in the cooler on site and kept with the samples from the time of collection, through shipment, and receipt by the laboratory.

Only the blanks that demonstrated contamination or encountered analytical problems are discussed.

were collected by nouring

Date: January 2002

Ground Water March/April/May 2000- The water equipment blanks were collected by pouring the rinse water over the decontaminated sampling equipment and capturing the run-off. See Table 2-3 for a summary of compounds detected.

No volatile or semivolatile organic compounds were detected in the source blank or the equipment blank collected at location WT114A with the exception of bis (2-ethylhexyl)phthalate (BEHP) in the source blank at a concentration of 33  $\mu$ g/L. However, the equipment blank collected at location WT102C contained several trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane), acetone, and 2- butanone. Because these analytes were not detected in the source blank their presence is likely due to inadequate rinsing of potable water from the sampling equipment. The field sample collected directly after this QC sample is not impacted since these compounds were not detected.

The source water blank, collected during the April/May 2000 sampling event was free from inorganic contamination with the exception of 3.9  $\mu$ g/L J of magnesium. However, both of the equipment blanks contained inorganic analytes with the higher concentrations noted at location WT102C. Of note is the presence of calcium at 648  $\mu$ g/L, magnesium at 197  $\mu$ g/L, and sodium at 4160  $\mu$ g/L from location WT102C, and 140  $\mu$ g/L of calcium from location WT114A. All other inorganic analytes were detected concentrations of 69.9  $\mu$ g/L or less.

The impact to the sample data is negligible.

1.35

Ground Water November 2000-This blank showed chloride, sulfate, bromide, calcium, copper, iron, potassium, magnesium, sodium, vanadium, nickel, methylene chloride, chloroform, 1,2-dichloroethane, bromodichloromethane, di-n-butylphthalate, and bis(2-ethylhexyl)phthalate contamination. The data has been qualifed "B" where the sample concentrations are greater than five times the amount of detected in the blank or "UB" when the amount detected is less than five times the amount reported in the blank. There were no instances of common laboratory contaminant detection in the samples.

**Soil Vapor** - Two equipment blanks and two field blanks were collected during the course of the field sampling effort to evaluate the potential influence on the subsurface samples from sampling equipment and ambient air. See Table 2-4 for a summary of the compounds detected in the ambient air and equipment blanks.

The field blanks were collected by drawing ambient air through a clean sorbent tube at approximately the same flow rate as used to collect the field sample. The air did not have contact with any sampling equipment as it was drawn into the sorbent tube. Freon 11 and carbon tetrachloride were present in both field blanks at concentrations near the sample reporting limit.

The outliers observed were primarily from the sample for metals analysis collected from residential well 54305 Westwood during both the April and November 2000 sampling. Specifically, the sample collected for metals analysis from 54305 Westwood during both the April and November 2000 events showed variability between the primary and duplicate samples of greater than 20% relative percent difference in a small subset of the metals. The concentrations of copper and zinc in both samples as well as the vanadium in November should be considered estimated. However, the impact to data quality is minimal since the results have been estimated for other reasons.

The monitoring well metals analyses demonstrated RPDs of less than 20% with the exception of arsenic at 5 mg/L while the duplicate was reported at 4 mg/L. The greatest difference calculated among all samples is the beryllium result from the November sampling that had an RPD of 100 percent. This difference is not alarming as it can be attributed to the low concentrations reported near the detection limit in the presence of blank contamination.

The few organic compounds that exceed the 20% cutoff also appear to be due to the low concentrations reported. The highest RPDs noted, 67% for bis(2-Ethylhexyl)phthalate and 40 % for cis-1,2-Dichloroethene, were calculated from concentrations of 8  $\mu$ g/L and 4  $\mu$ g/L, and from 2  $\mu$ g/L and 3  $\mu$ g/L respectively in the primary and duplicate samples. See Table 2-1 for all ground water duplicate sample RPDs.

**Soil Vapor** - The duplicate pairs show excellent precision with the following exception. See Table 2-2 for the soil vapor duplicate sample RPDs.

-Location TT-56:

The volatile organic compounds reported in this duplicate pair were present in both the primary and duplicate sample at very high concentrations. Although the RPD ranged from 63 to 141 percent the concentrations reported between the pairs was generally within the same order of magnitude.

#### 2.2 Equipment Blanks

Two ground water equipment blanks were collected during the April/May 2000 sampling and two soil gas equipment blanks were collected. For each matrix, one blank was collected near the beginning of the field effort and the other was collected at the conclusion of the investigation. In all instances, the blank samples were collected just prior to using the equipment at the referenced location. Also, a sample of the water used used to decontaminate the ground water sampling equipment was collected directly from the container to assure no analytes were present.

One equipment and one trip blank were collected during the November 2000 sampling.

#### DATA QUALITY EVALUATION REPORT

Date: January 2002

#### 1 General

This appendix presents the data usability assessment for soil gas and ground water samples collect in 2000. The soil gas samples were collected by the U.S. Army Corps of Engineers (USACE) Omaha District from October 20 through 29, 1999 and analyzed by Air Toxics Ltd, Folsom, California. The ground water sampling activities conducted from April 17 through May 3, 2000 were performed by the USACE and United States Geological Survey (USGS) with laboratory analysis by PDP Analytical Services, The Woodlands, TX. The ground water sampling conducted March 15-16, 2000 and November 15-16, 2000 was performed by the United States Environmental Protection Agency (USEPA) with laboratory analysis by EnviroSystems Inc., Columbia, MD and USEPA Region 5 Central Regional Laboratory respectively. The ground water samples were analyzed for the Target Compound List Volatiles and Semivolatiles and the Target Analyte List (23 metals plus cyanide) using USEPA Contract Laboratory Program Low Concentration Organic Analytical Services (OlC02.1) and Inorganic Routine Analytical Services. The soil vapor samples were prepared and analyzed using SW-846 Method 5041A/8260B. Quality control (QC) checks were performed routinely during data collection and analysis to verify that the data collected are of appropriate quality for the intended data use and that the data quality objectives were met. All of the data generated was validated using the criteria specified in the QAPP and QAPP addendums in conjunction with either the National Functional Guidelines for Organic and Inorganic Data Review -EPA 540/R-94/012 and /013, or the Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, Third Edition, Final Updates 1, 2, 2a, 3, along with the EPA Drinking Water Standards, 1996 using the criteria established in the approved QAPPs. The laboratory and validation reports are included in this appendix.

#### 2 Sample Collection Quality Control

#### 2.1 Field Duplicates

Field duplicates were collected at a rate of approximately 10% from all media sampled. For review purposes a limit of 20% (Relative Percent Difference) RPD was imposed on the ground water data and a limit of 50% RPD was imposed on the soil gas data to evaluate the precision of sample collection. In general, precision was very good and only outliers are discussed below.

**Ground Water** - The ground water field duplicates demonstrate excellent precision between sample pairs for all sampling events with relative percent differences predominantly in the range of zero to ten percent.

## **Appendix I-2**

Data Quality Evaluation Report for 1999-2000 Supplemental Site Investigations



AN ENVIRONMENTAL ANALYTICAL LABORATORY

180 BLUE RAVINE ROAD, E B FOLSOM, CA 95630-4719 (916) 985-1000 FAX: (916) 985-1020

Nº 016616

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Lab I.D.	Field Sample I.D.	Date & Time	Ana	alyses Requested	Canister Initial	er Pressure /	/ Vacuum
OIAIB	7713A 1, B	12/12/18 0730	WET SOULA/8	1260B/TICS	N/A	N/A	
CAALB	7716 A & B	12/12/95 0917	VOST 504/A/87	1260 B/ TICS	n/A	NA	
1346	7904 A & B	12/14/78 0800	VOST 50414/9		W/A	WA	
CHAB	7701 AEB	12/14/96 1136	VOST 5041A/		N/A	N/A	
DSA/B	1 · · · · · · · · · · · · · · · · · · ·	12/19/94 1238		1826.3/TICS	NA	NA	
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SAMPLE NAME : Lab Blank

ID#: 9812260-07B Modified VOST 5041A

File Name	912Z309a* #58 445 455 455 455 455 455 455 455 455 4	Date of Collection 10/4 Date of Analysis 12/4/28
Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	112	69-112
Toluene-d8	106	72-134
4-Bromofluorobenzene	119 Q	78-119
Dibromofluoromethane	111	70-130

**SAMPLE NAME: Lab Blank** 

ID#: 9812260-07B Modified VOST 5041A

File Name: 9122	2309a Barton Date of Collection NA 77 97 8 8 110 Date of Analysis: 312/23/98
Dif. Factor: 27, 29	CTURE OF AN AN AN AN AN AN AN AN AN AN AN AN AN

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane -	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0 -	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichioromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified



Container Type: NA



SAMPLE NAME : Lab Blank

ID#: 9812260-07A Modified VOST 5041A

File Name - DIL Factor 1995 St 1		Date of Collection NA Date of Analysis \$12/17/98
Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	103	69-112
Toluene-d8	108	72-134
4-Bromofluorobenzene	122 Q	78-119
Dibromofluoromethane	112	70-130

SAMPLE NAME: Lab Blank

ID#: 9812260-07A Modified VOST 5041A

File Name: - Date of Collection: NA L Dil3 Factor: Date of Analysis: 12/17/9	

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	11
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported** 

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

Q = Exceeds Quality Control limits.

Container Type: NA

SAMPLE NAME : 7902 A&B ID#: 9812260-06A/B

Modified VOST 5041A

File Name 912312 Date of Collection 1214/98 Date of Analysis 12/23/98
DIL-FACIOL PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE STATE OF THE PRINCIPLE S

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound CAS Number Match Quality Amo			
Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-me	18172-67-3	91 %	3800
.betaPinene	127-91-3	Manual ID	230
D-Limonene	5989-27-5	94 %	1500

Q = Exceeds Quality Control limits.
Container Type: VOST Tube

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	100	69-112
Toluene-d8	120	72-134
4-Bromofluorobenzene	157 Q	78-119
Dibromofluoromethane	111	70-130



SAMPLE NAME: 7902 A&B

ID#: 9812260-06A/B

Modified VOST 5041A

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many it is a device of the secretarial of the execution of the conditional day and a secretarized designations of the	91223124 # # # # # # # # # # # # # # # # # # #	to Newtonia transfer and and the contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the

Chloromethane         10         Not Detected           Vinyl Chloride         5.0         Not Detected           Bromomethane         10         Not Detected           Chloroethane         5.0         Not Detected           1,1-Dichloroethene         5.0         Not Detected           Carbon Disulfide         5.0         Not Detected           Acetone         50         Not Detected           Methylene Chloride         5.0         Not Detected           1,1-Dichloroethane         5.0         Not Detected           1,1-Dichloroethane         5.0         Not Detected           1,1-Dichloroethane         5.0         Not Detected           1,1-Dichloroethane         5.0         Not Detected           Cabun Tetrachloride         5.0         Not Detected           Solomote Tetrachloride         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           Bromodichloromethane         5.0         Not Detected           trans-1,3-Dichloropropene         5.0         Not Detected           4-Methyl-2-pentanone	Compound	Det. Limit (nG)	Amount (nG)
Bromomethane         10         Not Detected           Chloroethane         5.0         Not Detected           1,1-Dichloroethene         5.0         Not Detected           Carbon Disulfide         5.0         14           Acetone         50         Not Detected           Methylene Chloride         5.0         Not Detected           trans-1,2-Dichloroethene         5.0         Not Detected           1,1-Dichloroethane         5.0         21           Vinyl Acetate         10         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         5.0         23           1,1,1-Trichloroethane         5.0         Not Detected           Benzene         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           Bromodichloromethane         5.0         Not Detected           trans-1,3-Dichloropropene         5.0         Not Detected           trans-1,3-Dichloropropene         5.0         Not Detected           tollene         5.0	Chloromethane	10	Not Detected
Chloroethane         5.0         Not Detected           1,1-Dichloroethene         5.0         Not Detected           Carbon Disulfide         5.0         Not Detected           Acetone         50         Not Detected           Methylene Chloride         5.0         Not Detected           trans-1,2-Dichloroethene         5.0         Not Detected           1,1-Dichloroethane         5.0         21           Vinyl Acetate         10         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         5.0         23           1,1,1-Trichloroethane         5.0         Not Detected           Enzene         5.0         Not Detected           Benzene         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0	Vinyl Chloride	5.0	Not Detected
1,1-Dichloroethene         5.0         Not Detected           Carbon Disulfide         5.0         14           Acetone         50         Not Detected           Methylene Chloride         5.0         Not Detected           trans-1,2-Dichloroethene         5.0         Not Detected           1,1-Dichloroethane         5.0         21           Vinyl Acetate         10         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         5.0         23           1,1,1-Trichloroethane         5.0         Not Detected           Carbon Tetrachloride         5.0         Not Detected           Benzene         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           1,2-Dichloroptopane         5.0         Not Detected           1,2-Dichloroptopane         5.0         Not Detected           1,2-Dichloroptopane         5.0         Not Detected           1,2-Dichloroptopane         5.0         Not Detected           1,2-Dichloroptopane         5.0         Not Detected           1,2-Dichloroptopane         5.0         Not Detected           1,1,2-Trichloroethane         5.0	Bromomethane	10	Not Detected
Carbon Disulfide         5.0         14           Acetone         50         Not Detected           Methylene Chloride         5.0         Not Detected           trans-1,2-Dichloroethene         5.0         Not Detected           1,1-Dichloroethane         5.0         21           Vinyl Acetate         10         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         5.0         23           1,1,1-Trichloroethane         5.0         Not Detected           Carbon Tetrachloride         5.0         Not Detected           Benzene         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           Trichloroethene         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           Bromodichloromethane         5.0         Not Detected           Trichloropropane         5.0         Not Detected           Whethyl-2-pentanone         10         Not Detected           Toluene         5.0         Not Detected           Toluene         5.0         Not Detected           Tetrachloroethane         5.0         Not Detected	Chloroethane	5.0	Not Detected
Acetone         50         Not Detected           Methylene Chloride         5.0         Not Detected           trans-1,2-Dichloroethene         5.0         Not Detected           1,1-Dichloroethane         5.0         21           Vinji Acetate         10         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         5.0         23           1,1,1-Trichloroethane         5.0         Not Detected           Carbon Tetrachloride         5.0         Not Detected           Benzene         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1-2-Dichloropropane         5.0         Not Detected           1,1-2-Trichloropropane         5.0         Not Detected           1,1,2-Trichloroethane	1,1-Dichloroethene	5.0	Not Detected
Methylene Chloride         5.0         Not Detected           trans-1,2-Dichloroethene         5.0         Not Detected           1,1-Dichloroethane         5.0         21           Vinyl Acetate         10         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           C-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         5.0         23           1,1,1-Trichloroethane         5.0         Not Detected           Carbon Tetrachloride         5.0         Not Detected           Benzene         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1-2-Dichloropropane         5.0         Not Detected           1-2-Dichloropropane         5.0         Not Detected           1-2-Dichloropropane         5.0         Not Detected           1-1,2-Tichloropropane         5.0         Not Detected           1-1,2-T	Carbon Disulfide	5.0	14
trans-1,2-Dichloroethane         5.0         21           Vinyl Acetate         10         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           C-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         5.0         23           1,1,1-Trichloroethane         5.0         Not Detected           Carbon Tetrachloride         5.0         Not Detected           Benzene         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropene         5.0         Not Detected           1,3-Dichloropropene         5.0         Not Detected           4-Methyl-2-pentanone         10         Not Detected           Tolluene         5.0         18           cis-1,3-Dichloropropene         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           Tetrachloroethane         5.0         Not Detected           Tetrachloroethane         5.0         Not Detected           Chlorobenzene	Acetone	50	Not Detected
1,1-Dichloroethane         5.0         21           Vinyl Acetate         10         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         5.0         23           1,1,1-Trichloroethane         5.0         Not Detected           Benzene         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           Bromodichloromethane         5.0         Not Detected           1rans-1,3-Dichloropropene         5.0         Not Detected           4-Methyl-2-pentanone         10         Not Detected           Tolluene         5.0         Not Detected           1,1,2-Trichloropropene         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           Tetrachloroethane         5.0         Not Detected           Tetrachloroethane         5.0         Not Detected           Chlorobenzene <t< td=""><td>Methylene Chloride</td><td>5.0</td><td>Not Detected</td></t<>	Methylene Chloride	5.0	Not Detected
Vinyl Acetate         10         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         5.0         23           1,1,1-Trichloroethane         5.0         Not Detected           Carbon Tetrachloride         5.0         Not Detected           Benzene         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           Bromodichloromethane         5.0         Not Detected           trans-1,3-Dichloropropene         5.0         Not Detected           4-Methyl-2-pentanone         10         Not Detected           Toluene         5.0         Not Detected           Toluene         5.0         Not Detected           1,1,2-Trichloropropene         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           Tetrachloroethane         5.0         Not Detected           Dibromochloromethane         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected           m,x-Yylene         5.0	trans-1,2-Dichloroethene	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         5.0         23           1,1,1-Trichloroethane         5.0         75           Carbon Tetrachloride         5.0         Not Detected           Benzene         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           Trichloroethene         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           Bromodichloromethane         5.0         Not Detected           trans-1,3-Dichloropropene         5.0         Not Detected           4-Methyl-2-pentanone         10         Not Detected           Toluene         5.0         Not Detected           cis-1,3-Dichloropropene         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           120         Not Detected           2-Hexanone         10         Not Detected           Dibromochloromethane         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected	1,1-Dichloroethane	5.0	21
Chloroform         5.0         23           1,1,1-Trichloroethane         5.0         75           Carbon Tetrachloride         5.0         Not Detected           Benzene         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           Bromodichloromethane         5.0         Not Detected           Bromodichloropropene         5.0         Not Detected           4-Methyl-2-pentanone         10         Not Detected           Toluene         5.0         Not Detected           Cis-1,3-Dichloropropene         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           Tetrachloroethane         5.0         Not Detected           Dibromochloromethane         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected           m,p-Xylene         5.0         Not Detected           o-Xylene         5.0         Not	Vinyl Acetate	10	Not Detected
1,1,1-Trichloroethane       5.0       75         Carbon Tetrachloride       5.0       Not Detected         Benzene       5.0       Not Detected         1,2-Dichloroethane       5.0       Not Detected         Trichloroptopane       5.0       Not Detected         1,2-Dichloropropane       5.0       Not Detected         Bromodichloromethane       5.0       Not Detected         trans-1,3-Dichloropropene       5.0       Not Detected         4-Methyl-2-pentanone       10       Not Detected         Toluene       5.0       18         cis-1,3-Dichloropropene       5.0       Not Detected         1,1,2-Trichloroethane       5.0       Not Detected         Tetrachloroethane       5.0       Not Detected         Tetrachloroethane       5.0       Not Detected         Chlorobenzene       5.0       Not Detected         Chlorobenzene       5.0       Not Detected         Ethyl Benzene       5.0       Not Detected         m,p-Xylene       5.0       Not Detected         o-Xylene       5.0       Not Detected         Styrene       5.0       Not Detected         Bromoform       5.0       Not Detected	2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Carbon Tetrachloride         5.0         Not Detected           Benzene         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           Trichloroethene         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           Bromodichloromethane         5.0         Not Detected           Bromodichloropropene         5.0         Not Detected           4-Methyl-2-pentanone         10         Not Detected           Toluene         5.0         18           cis-1,3-Dichloropropene         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           1-1,2-Trichloroethane         5.0         Not Detected           Tetrachloroethene         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected           m,p-Xylene         5.0         Not Detected           G-Xylene         5.0         Not Detected           Styrene         5.0         Not Detected           Bromoform         5.0         Not Detected	Chloroform	5.0	23
Benzene         5.0         Not Detected           1,2-Dichloroethane         5.0         Not Detected           Trichloroethene         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           Bromodichloromethane         5.0         Not Detected           trans-1,3-Dichloropropene         5.0         Not Detected           4-Methyl-2-pentanone         10         Not Detected           Toluene         5.0         18           cis-1,3-Dichloropropene         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           2-Hexanone         10         Not Detected           Dibromochloromethane         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected           m.p-Xylene         5.0         Not Detected           o-Xylene         5.0         Not Detected           Styrene         5.0         Not Detected           Bromoform         5.0         Not Detected           1,1,2,2-Tetrachloroethane         5.0         Not Detected<	1,1,1-Trichloroethane	5.0	75
1,2-Dichloroethane       5.0       Not Detected         Trichloroethene       5.0       Not Detected         1,2-Dichloropropane       5.0       Not Detected         Bromodichloromethane       5.0       Not Detected         trans-1,3-Dichloropropene       5.0       Not Detected         4-Methyl-2-pentanone       10       Not Detected         Toluene       5.0       18         cis-1,3-Dichloropropene       5.0       Not Detected         1,1,2-Trichloroethane       5.0       Not Detected         1,1,2-Trichloroethane       5.0       Not Detected         2-Hexanone       10       Not Detected         Dibromochloromethane       5.0       Not Detected         Chlorobenzene       5.0       Not Detected         Ethyl Benzene       5.0       Not Detected         m,p-Xylene       5.0       Not Detected         o-Xylene       5.0       Not Detected         Styrene       5.0       Not Detected         Bromoform       5.0       Not Detected         1,1,2,2-Tetrachloroethane       5.0       Not Detected	Carbon Tetrachloride	5.0	Not Detected
Trichloroethene         5.0         Not Detected           1,2-Dichloropropane         5.0         Not Detected           Bromodichloromethane         5.0         Not Detected           trans-1,3-Dichloropropene         5.0         Not Detected           4-Methyl-2-pentanone         10         Not Detected           Toluene         5.0         18           cis-1,3-Dichloropropene         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           Tetrachloroethene         5.0         Not Detected           2-Hexanone         10         Not Detected           Dibromochloromethane         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected           m,p-Xylene         5.0         Not Detected           o-Xylene         5.0         Not Detected           Styrene         5.0         Not Detected           Bromoform         5.0         Not Detected           1,1,2,2-Tetrachloroethane         5.0         Not Detected	Benzene	5.0	Not Detected
1,2-Dichloropropane         5.0         Not Detected           Bromodichloromethane         5.0         Not Detected           trans-1,3-Dichloropropene         5.0         Not Detected           4-Methyl-2-pentanone         10         Not Detected           Toluene         5.0         18           cis-1,3-Dichloropropene         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           Tetrachloroethene         5.0         120           2-Hexanone         10         Not Detected           Dibromochloromethane         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected           m,p-Xylene         5.0         Not Detected           o-Xylene         5.0         Not Detected           Styrene         5.0         Not Detected           Bromoform         5.0         Not Detected           1,1,2,2-Tetrachloroethane         5.0         Not Detected	1,2-Dichloroethane	5.0	Not Detected
Bromodichloromethane         5.0         Not Detected           trans-1,3-Dichloropropene         5.0         Not Detected           4-Methyl-2-pentanone         10         Not Detected           Toluene         5.0         18           cis-1,3-Dichloropropene         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           Tetrachloroethene         5.0         120           2-Hexanone         10         Not Detected           Dibromochloromethane         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected           m,p-Xylene         5.0         Not Detected           o-Xylene         5.0         Not Detected           Styrene         5.0         Not Detected           Bromoform         5.0         Not Detected           1,1,2,2-Tetrachloroethane         5.0         Not Detected	Trichloroethene	5.0	Not Detected
trans-1,3-Dichloropropene         5.0         Not Detected           4-Methyl-2-pentanone         10         Not Detected           Toluene         5.0         18           cis-1,3-Dichloropropene         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           Tetrachloroethene         5.0         120           2-Hexanone         10         Not Detected           Dibromochloromethane         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected           m,p-Xylene         5.0         Not Detected           o-Xylene         5.0         Not Detected           Styrene         5.0         Not Detected           Bromoform         5.0         Not Detected           1,1,2,2-Tetrachloroethane         5.0         Not Detected	1,2-Dichloropropane	5.0	Not Detected
4-Methyl-2-pentanone       10       Not Detected         Toluene       5.0       18         cis-1,3-Dichloropropene       5.0       Not Detected         1,1,2-Trichloroethane       5.0       Not Detected         Tetrachloroethene       5.0       120         2-Hexanone       10       Not Detected         Dibromochloromethane       5.0       Not Detected         Chlorobenzene       5.0       Not Detected         Ethyl Benzene       5.0       Not Detected         m,p-Xylene       5.0       Not Detected         o-Xylene       5.0       Not Detected         Styrene       5.0       Not Detected         Bromoform       5.0       Not Detected         1,1,2,2-Tetrachloroethane       5.0       Not Detected	Bromodichloromethane	5.0	Not Detected
Toluene         5.0         18           cis-1,3-Dichloropropene         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           Tetrachloroethene         5.0         120           2-Hexanone         10         Not Detected           Dibromochloromethane         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected           m,p-Xylene         5.0         Not Detected           o-Xylene         5.0         Not Detected           Styrene         5.0         Not Detected           Bromoform         5.0         Not Detected           1,1,2,2-Tetrachloroethane         5.0         Not Detected	trans-1,3-Dichloropropene	5.0	Not Detected
cis-1,3-Dichloropropene         5.0         Not Detected           1,1,2-Trichloroethane         5.0         Not Detected           Tetrachloroethene         5.0         120           2-Hexanone         10         Not Detected           Dibromochloromethane         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected           m,p-Xylene         5.0         Not Detected           o-Xylene         5.0         Not Detected           Styrene         5.0         Not Detected           Bromoform         5.0         Not Detected           1,1,2,2-Tetrachloroethane         5.0         Not Detected	4-Methyl-2-pentanone	10	Not Detected
1,1,2-Trichloroethane         5.0         Not Detected           Tetrachloroethene         5.0         120           2-Hexanone         10         Not Detected           Dibromochloromethane         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected           m,p-Xylene         5.0         Not Detected           o-Xylene         5.0         Not Detected           Styrene         5.0         Not Detected           Bromoform         5.0         Not Detected           1,1,2,2-Tetrachloroethane         5.0         Not Detected	Toluene	5.0	18
Tetrachloroethene         5.0         120           2-Hexanone         10         Not Detected           Dibromochloromethane         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected           m,p-Xylene         5.0         Not Detected           o-Xylene         5.0         Not Detected           Styrene         5.0         Not Detected           Bromoform         5.0         Not Detected           1,1,2,2-Tetrachloroethane         5.0         Not Detected	cis-1,3-Dichloropropene	5.0	Not Detected
2-Hexanone         10         Not Detected           Dibromochloromethane         5.0         Not Detected           Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected           m,p-Xylene         5.0         Not Detected           o-Xylene         5.0         Not Detected           Styrene         5.0         Not Detected           Bromoform         5.0         Not Detected           1,1,2,2-Tetrachloroethane         5.0         Not Detected	1,1,2-Trichloroethane	5.0	Not Detected
Dibromochloromethane5.0Not DetectedChlorobenzene5.0Not DetectedEthyl Benzene5.0Not Detectedm,p-Xylene5.0Not Detectedo-Xylene5.0Not DetectedStyrene5.0Not DetectedBromoform5.0Not Detected1,1,2,2-Tetrachloroethane5.0Not Detected	Tetrachloroethene	5.0	120
Chlorobenzene         5.0         Not Detected           Ethyl Benzene         5.0         Not Detected           m,p-Xylene         5.0         Not Detected           o-Xylene         5.0         Not Detected           Styrene         5.0         Not Detected           Bromoform         5.0         Not Detected           1,1,2,2-Tetrachloroethane         5.0         Not Detected	2-Hexanone	10	Not Detected
Ethyl Benzene         5.0         Not Detected           m,p-Xylene         5.0         Not Detected           o-Xylene         5.0         Not Detected           Styrene         5.0         Not Detected           Bromoform         5.0         Not Detected           1,1,2,2-Tetrachloroethane         5.0         Not Detected	Dibromochloromethane	5.0	Not Detected
m,p-Xylene 5.0 Not Detected o-Xylene 5.0 Not Detected Styrene 5.0 Not Detected Bromoform 5.0 Not Detected 1,1,2,2-Tetrachloroethane 5.0 Not Detected	Chlorobenzene	5.0	Not Detected
m,p-Xylene 5.0 Not Detected o-Xylene 5.0 Not Detected Styrene 5.0 Not Detected Bromoform 5.0 Not Detected 1,1,2,2-Tetrachloroethane 5.0 Not Detected	Ethyl Benzene	5.0	Not Detected
o-Xylene 5.0 Not Detected Styrene 5.0 Not Detected Styrene 5.0 Not Detected Bromoform 5.0 Not Detected 1,1,2,2-Tetrachloroethane 5.0 Not Detected			Not Detected
Styrene5.0Not DetectedBromoform5.0Not Detected1,1,2,2-Tetrachloroethane5.0Not Detected	· · · · · · · · · · · · · · · · · · ·		Not Detected
Bromoform 5.0 Not Detected 1,1,2,2-Tetrachloroethane 5.0 Not Detected	•	5.0	Not Detected
1,1,2,2-Tetrachloroethane 5.0 Not Detected	•		
	1,1,2,2-Tetrachloroethane		Not Detected
	cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Methane, oxybis-	115-10-6	Manual ID	220
Methane, trichlorofluoro-	75-69-4	78 %	50
Methane, dimethoxy-	109-87-5	78 %	110
Cyclohexene, 4-methylene-1-(1-methylethy	99-84-3	89 %	30
.alphaPinene	80-56-8	97 %	34000
Camphene	79-92-5	83 %	340



SAMPLE NAME: 7903 A&B

ID#: 9812260-05A/B Modified VOST 5041A

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File Name: 91223(1, 2 91223(1, 2 91223))  Dit Factor: Date of Analysis: 12/23/98

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

CompoundCAS NumberMatch QualityAmount (nG)D-Limonene5989-27-594 %2200

Q = Exceeds Quality Control limits.

Container Type: VOST Tube

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	122 Q	69-112
Toluene-d8	110	72-134
4-Bromofluorobenzene	189 Q	78-119
Dibromofluoromethane	123	70-130

SAMPLE NAME: 7903 A&B ID#: 9812260-05A/B

Modified VOST 5041A

File Name:	9122311 2 7	Date of Collections £2/14/98. Date of Analysis = £2/23/98.
Dir. Lactor		Date of Analysis 24223/96

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	30
Acetone	50	52
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	34
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	37
1,1,1-Trichloroethane	5.0	130
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	5.9
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	5.2
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyi-2-pentanone	10	Not Detected
Toluene	5.0	81
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	160
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	6.7
m,p-Xylene	5.0	12
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, trichlorofluoro-	75-69-4	90 %	47
Cyclohexene, 4-methylene-1-(1-methylethy	99-84-3	93 %	1200
.alphaPinene	80-56-8	97 %	44000
Camphene	79-92-5	93 %	510
Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-me	18172-67-3	94 %	3300
.betaMyrcene	123-35-3	72 %	460

SAMPLE NAME: 7901 A&B

ID#: 9812260-04A/B

Modified VOST 5041A

File Name	F91223105	Date of Collection 12/14/98 Date of Analysis 12/23/98
Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	111	69-112
Toluene-d8	119	72-134
4-Bromofluorobenzene	124 Q	78-119
Dibromofluoromethane	98	70-130



SAMPLE NAME: 7901 A&B

ID#: 9812260-04A/B Modified VOST 5041A

File Name: 9122310 Date of Collection: 12/14/98/ Dil. Factor: Date of Analysis: \$12/23/98
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Compound	Det. Limit (nG)	Amount (nG)
Chioromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	14
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	27
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	150
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	53
1,1,1-Trichloroethane	5.0	1500 E
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	27
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	45
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

#### **TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

Compound	CAS Number	Match Quality	Amount (nG)
Methane, trichlorofluoro-	75-69-4	83 %	260



Q = Exceeds Quality Control limits.

**Container Type: VOST Tube** 



SAMPLE NAME: 7904 A&B

ID#: 9812260-03A/B Modified VOST 5041A

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Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	103	69-112
Toluene-d8	111	72-134
4-Bromofluorobenzene	105	78-119
Dibromofluoromethane	93	70-130



SAMPLE NAME: 7904 A&B

ID#: 9812260-03A/B

Modified VOST 5041A

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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified

Container Type: VOST Tube

Surrogates % Recovery Method Limits



SAMPLE NAME: 7716 A&B

ID#: 9812260-02A/B Modified VOST 5041A

File Name 9121706 9 Date of Collecti DII Factor: QF0 9 Date of Analysi	on: 12/12/98
DIL Factor: LA Dates Analysi	s. 12/17/98&

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			:d
Compound	CAS Number	Match Quality	Amount (nG)
Benzene, butyl-	104-51-8	Manual ID	91
Bicyclo[2.2.1]heptane, 2,2,3-trimethyl-,	20536-40-7	93 %	96
D-Limonene	5989-27-5	94 %	640
Benzene, methyl(1-methylethyl)-	25155-15-1	91 %	250

Q = Exceeds Quality Control limits.

Container Type: VOST Tube

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	111	69-112
Toluene-d8	105	72-134
4-Bromofluorobenzene	120 Q	78-119
Dibromofluoromethane	96 .	70-130

## AIR TOXICS LTD. SAMPLE NAME: 7716 A&B

ID#: 9812260-02A/B Modified VOST 5041A

File Name: 9121706 2 Page Date of College	ction: 412/12/98
Dil. Factor: Date of Analy	isis: 12/17/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	25
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	110
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	5.2
1,1,1-Trichloroethane	5.0	140
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	23
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	64
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	160
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachioroethene	5.0	110
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	8.5
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, trichlorofluoro-	75-69-4	90 %	230
Octane	111-65-9	94 %	220
Cyclopropane, 1,1-dimethyl-2-(3-methyl-1	68998-21-0	91 %	65
Cyclohexene, 4-methylene-1-(1-methylethy	99-84-3	93 %	1100
.alphaPinene	80-56-8	96 %	10000
Bicyclo[3.1.0]hexane, 6-isopropylidene-1	24524-57-0	91 %	2600

SAMPLE NAME: 7111 A&B

ID#: 9811313-01A/B Modified VOST 5041A

Date of Collection: 11/17/98

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	95	69-112
Toluene-d8	108	72-134
4-Bromofluorobenzene	108	78-119
Dibromofluoromethane	98	70-130

## 5

## AIR TOXICS LTD.

SAMPLE NAME: 7111 A&B

ID#: 9811313-01A/B

Modified VOST 5041A

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Dil. Factor:	**************************************	Date of Analysis: 11/30/98
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	13	Not Detected
Vinyl Chloride	6.5	Not Detected
Bromomethane	13	Not Detected
Chloroethane	6.5	Not Detected
1,1-Dichloroethene	6.5	Not Detected
Carbon Disulfide	6.5	7.3
Acetone	65	Not Detected
Methylene Chloride	6.5	Not Detected
trans-1,2-Dichloroethene	6.5	Not Detected
1,1-Dichloroethane	6.5	Not Detected
Vinyl Acetate	13	Not Detected
2-Butanone (Methyl Ethyl Ketone)	65	Not Detected
Chloroform	6.5	Not Detected
1,1,1-Trichloroethane	6.5	Not Detected
Carbon Tetrachloride	6.5	Not Detected
Benzene	6.5	37
1,2-Dichloroethane	6.5	Not Detected
Trichloroethene	6.5	Not Detected
1,2-Dichloropropane	<b>6.5</b>	Not Detected
Bromodichloromethane	6.5	Not Detected
trans-1,3-Dichloropropene	6.5	Not Detected
4-Methyl-2-pentanone	13	Not Detected
Toluene	6.5	7.6
cis-1,3-Dichloropropene	6.5	Not Detected
1,1,2-Trichloroethane	6.5	Not Detected
Tetrachloroethene	6.5	22
2-Hexanone	13	Not Detected
Dibromochloromethane	6.5	Not Detected
Chlorobenzene	6.5	Not Detected
Ethyl Benzene	6.5	6.5
m,p-Xylene	6.5	14
o-Xylene	6.5	Not Detected
Styrene	6.5	Not Detected
Bromoform	6.5	Not Detected
1,1,2,2-Tetrachloroethane	6.5	Not Detected
cis-1,2-Dichloroethene	6.5	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified



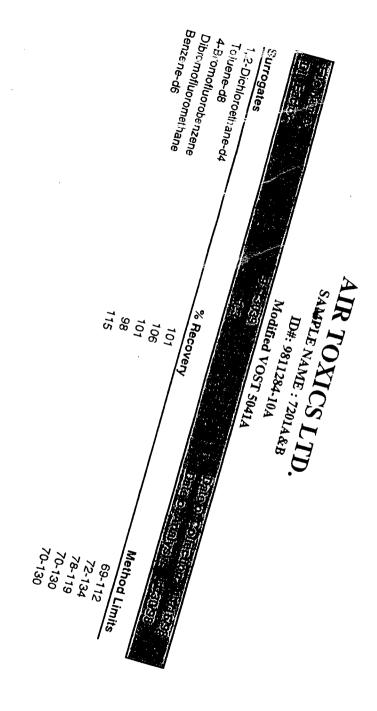
**Container Type: VOST Tube** 

SAMPLE NAME : Lab Blank

ID#: 9811284-11A Modified VOST 5041A

Compound	Det. Limit (nG)		Amount (nG)
Chloromethane	10		Not Detected
Vinyl Chloride	5.0		Not Detected
Bromomethane	10		Not Detected
Chloroethane	5.0		Not Detected
,1-Dichloroethene	5.0		Not Detected
Carbon Disulfide	5.0		Not Detected
Acetone	50		Not Detected
Methylene Chloride	5.0		Not Detected
trans-1,2-Dichloroethene	5.0		Not Detected
1,1-Dichloroethane	5.0		Not Detected
Vinyl Acetate	10		Not Detected
2-Butanone (Methyl Ethyl Ketone)	50		Not Detected
Chloroform	5.0		Not Detected
1,1,1-Trichloroethane	5.0		Not Detected
Carbon Tetrachloride	5.0		Not Detected
Benzene	5.0		Not Detected
1,2-Dichloroethane	5.0		Not Detected
Trichloroethene	5.0		Not Detected
1,2-Dichloropropane	5.0		Not Detected
Bromodichloromethane	5.0		Not Detected
trans-1,3-Dichloropropene	5.0		Not Detected
4-Methyl-2-pentanone	10		Not Detected
Toluene	5.0		Not Detected
cis-1,3-Dichloropropene	5.0		Not Detected
1,1,2-Trichloroethane	5.0		Not Detected
Tetrachloroethene	5.0		Not Detected
2-Hexanone	10		Not Detected
Dibromochloromethane	5.0		Not Detected
Chlorobenzene	5.0		Not Detected
Ethyl Benzene	5.0		Not Detected
m,p-Xylene	5.0		Not Detected
o-Xylene	5.0		Not Detected
Styrene	5.0		Not Detected
Bromoform	5.0		Not Detected
1,1,2,2-Tetrachloroethane			Not Detected
cis-1,2-Dichloroethene	5.0 5.0		Not Detected
6.3- 1,2-DIGHOIOGUIGHE	5.0		Hot Detected
TENTATIVE	LY IDENTIFIED COMPOUN	•	
Compound	CAS Number	Match Quality	Amount (nG)
None Identified			
Container Type: NA			





SAMPLE NAME: 7713 A&B

ID#: 9812260-01A/B Modified VOST 5041A

Elle Name: 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 9121705 912	Date of Collections \$12/12/98
Diffractor 1996 1997 1997 1997	Date of Analysis 12/17/98

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	96	69-112
Toluene-d8	108	72-134
4-Bromofluorobenzene	106	78-119
Dibromofluoromethane	99	70-130



SAMPLE NAME: 7713 A&B

ID#: 9812260-01A/B Modified VOST 5041A

File Name:	9121705 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Date of Collection: 12(12/98
DIL-Factor.		TO A TO A

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported** 

Compound CAS Number Match Quality Amount (nG)

None Identified

Container Type: VOST Tube

Surrogates % Recovery Method Limits

# LABORATORY NARRATIVE Analysis of Volatile Organic Compounds in VOST Cartridges by EPA 5041A/8260B U.S. Army Corps of Engineers

Work Order #9812260

Six Tenax and Tenax/charcoal tube pairs (VOST cartridges) were received on December 16, 1998. The sacrificial temperature check vial was not provided with the shipment, therefore the actual temperature of the shipment was not recorded. The samples were received on ice and therefore their integrity is not in question. The laboratory performed the analysis via EPA SW-846 Method 5041A using GC/MS in the full scan mode. The method involves thermal desorption of the VOST cartridges for 11 min. at 180° C using an inert gas. The gas stream is then bubbled through 5 mL of organic free water and trapped on the sorbent trap of the purge and trap system. The trap is thermally desorbed to elute the components into the GC system for further separation. See the data sheets for the reporting limits for each compound.

Bromomethane was detected in the laboratory blank run on 12/17/98. The "B" flag was applied to the associated results.

Recovery of the internal standard compound 1,4-Dichlorobenzene-d4 was outside the limits of ±50% difference (D) from the daily calibration checks internal standard area in sample 7903A&B. Re-analysis to confirm matrix effects is not possible for VOST tube samples.

Recovery of the surrogate compound 1,2-Dichloroethane-d4 was slightly above the laboratory established limits of 69-112% in sample 7903A&B. Recovery of the surrogate compound 4-Bromofluorobenzene was above the laboratory established limits of 78-119% in samples 7716A&B, 7901A&B, 7903A&B and 7902A&B. Re-analysis to confirm matrix effects is not possible for VOST tube samples.

There were no other out of the ordinary circumstances to report.

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
- J Estimated Value.
- E Exceeds instrument calibration range.
- S Saturated Peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- N The identification is based on presumptive evidence.



### WORK ORDER #: 9812260

Work Order Summary

CLIENT:

Mr. Steve Peterson

BILL TO: Same

U.S. Army Corps of Engineers 215 N. 17th Street, Zorinsky Bldg.

Omaha, NE 68102-4978

PHONE:

402-221-7183

P.O. # NR

FAX:

402-221-7769

PROJECT # DACW45-99-P-0094 Himco Dump

DATE RECEIVED: 12/1

12/16/98

DATE COMPLETED: 12/24/98

FRACTION #	NAME	TEST
01A/B	7713 A&B	VOST 5041A/8260B/TIC's
02A/B	7716 A&B	VOST 5041A/8260B/TIC's
03A/B	7904 A&B	VOST 5041 A/8260B/TIC's
04A/B	7901 A&B	VOST 5041A/8260B/TIC's
05A/B	7903 A&B	VOST 5041A/8260B/TIC's
06A/B	7902 A&B	VOST 5041 A/8260B/TIC's
07A	Lab Blank	VOST 5041 A/8260B/TIC's
07B	Lab Blank	VOST 5041A/8260B/TIC's

CERTIFIED BY:

Laboratory Director

DATE: 12/24/98

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217



AN ENVIRONMENTAL ANALYTICAL LABORATORY

180 BLUE RAVINE ROAD, FOLSOM, CA 95630-4719 (916) 985-1000 FAX: (916) 985-1020

Nº 017840

Page I of I

#### CHAIN-OF-CUSTODY RECORD Grabowski **Turn Around Time:** Project info: Company U.S. Army Corps of Engineers Address 215 N. 17th St. City Omaha State VE Zip 68102 Phone (402) 221-7784 FAX (402) 221-7769 P.O. # Normal Project # ☐ Rush \_ Project Name times tump Superful Site Specify Collected By: Signature Canister Pressure / Vacuum Lab Field Sample I.D. Date & Time Analyses Requested Initial **Final** Receipt 01A/B 7715 A & B 12/11/98 0730 VOST 5041 A/8260 B/TICS N/A 7720 AEB 12/1/98 0926 UOST 5041A/8260B/TICS 12/11/98 1024 VOST 5041A/8260 B/TICS 12/11/98 1112 UST SO41A/8260 B/TICS 7707 AFB 7718 A & B 7717 A&B 12/11/98 1521 UOST 5041A/8260B/TICS OSAB 7714 A&B OBAB VOST SO414/8260 B/ TICS NA Print Name Notes: Received By: (Signature) Date/Time Received By: (Signiture) Date/Time Relinquished By: (Signature) Date/Time Date/Time Shipper Name Air Bill # Opened By: Temp. (°C) Condition **Custody Seals Intact?** Work Order # Lab Yes No (None N/A 9812208 Use Only

SAMPLE NAME : Lab Blank

ID#: 9812208-07A Modified VOST 5041A

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Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	107 ·	69-112
Toluene-d8	101	72-134
4-Bromofluorobenzene	108	78-119
Dibromofluoromethane	106	70-130

SAMPLE NAME: Lab Blank

ID#: 9812208-07A Modified VOST 5041A

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	13
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	. 5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified None Identified

Container Type: NA



SAMPLE NAME: 7714 A&B

ID#: 9812208-06A/B Modified VOST 5041A

File Name: 9121414	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
File Name: Vale of Collection: 124	11/987555-
	La distribution library
LUIL FACTOR: Date of Analysis: 12/14	1385 100 Sec.

TENTATIVELY	TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported		
Compound	CAS Number	Match Quality	Amount (nG)
Cyclohexane, 1,1,3-trimethyl-	3073-66-3	72 %	240
Cyclohexane, 1-ethyl-4-methyl-, trans-	6236-88-0	Manual ID	340
.alphaPinene	80-56-8	96 %	740
Bicyclo(2.2.1]hept-2-ene 1.7.7-trimethy	464-17-5	86 %	250

B = Compound present in laboratory blank, background subtraction not performed.

E = Exceeds instrument calibration range.

Q = Exceeds Quality Control limits.

**Container Type: VOST Tube** 

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	114 Q	69-112
Toluene-d8	103	72-134
4-Bromofluorobenzene	214 Q	78-119
Dibromofluoromethane	109	70-130



SAMPLE NAME: 7714 A&B

## ID#: 9812208-06A/B

#### **Modified VOST 5041A**

File Name: 9121414	Date of Collection: 12/11/98
File Name: 9121414 91DIL-Factor: 1.0	Date of Applyaics 12/14/0955
Dill-Pacioi.	Date of Allarysis. 12/14/303-167-1

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	19 B
Chloroethane	5.0	100
1,1-Dichloroethene	5.0	13
Carbon Disulfide	5.0	27
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	12
1,1-Dichloroethane	5.0	6600 E
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	170
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	140
1,2-Dichloroethane	5.0	8.8
Trichloroethene	5.0	940
1,2-Dichloropropane	5.0	110
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	29
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	900
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	140
m,p-Xylene	- 5.0	220
o-Xylene	5.0	83
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	66

### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	74 %	3800
Methane, dichlorofluoro-	75-43-4	91 %	2500
Ethyl ether	60-29-7	90 %	310
Hexane	110-54-3	83 %	170
Cyclopentane, methyl-	96-37-7	78 %	420
Cyclohexane, methyl-	108-87-2	91 %	340



SAMPLE NAME: 7717 A&B

ID#: 9812208-05A/B Modified VOST 5041A

File Name: 91219 DIL Factor: 91219	<ol> <li>Committee on the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee of the committee</li></ol>		The A. Market Programmer and the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committee of the Committ
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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			d
Compound	CAS Number	Match Quality	Amount (nG)
Decane	124-18-5	Manual ID	26
Cyclopentane, 1,1-dimethyl-	1638-26-2	Manual ID	74
Heptane, 2,2-dimethyl-	1071-26-7	Manual ID	120
3-Eicosene, (E)-	74685-33-9	Manual ID	120
Undecane	1120-21-4	91 %	56

**Container Type: VOST Tube** 

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	106	69-112
Toluene-d8	104	72-134
4-Bromofluorobenzene	100	78-119
Dibromofluoromethane	111	70-130

SAMPLE NAME: 7717 A&B

ID#: 9812208-05A/B Modified VOST 5041A

File Name: 9121413	Date of Collection: 12/11/98 > Date of Analysis: 12/14/98 >
Dil. Factor:	Date of Analysis: 12/14/98

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	5.8
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	7.5
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	6.4
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	5.2
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	24
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	9.4
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	49
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	70 %	6200
Methane, trichlorofluoro-	75-69-4	90 %	230
Hexane	110-54-3	91 %	34
Octane	111-65-9	72 %	58
Nonane	111-84-2	91 %	80
Cyclopropane, 1-ethyl-1-methyl-	53778-43-1	Manual ID	37



SAMPLE NAME: 7718 A&B

ID#: 9812208-04A/B Modified VOST 5041A

File Name: 9121412 Dil: Factor: 1.0	하는 나는 나는 그는 그 그 그래요? 하는 사이 가장 그는 이 선생님에 살아 살아 살아 내려왔다면 하는 것이 살아 먹는 것이 없는 것이다.

Container Type: VOST Tube

Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	112	69-112
Toluene-d8	106	72-134
4-Bromofluorobenzene	115	78-119
Dibromofluoromethane	108	70-130

SAMPLE NAME: 7718 A&B

ID#: 9812208-04A/B Modified VOST 5041A

File Name	0121412	alian katika k	Mark Malking what	Data of Callagtic	10H1/00
Luc Mante-	3121412			Date of Collection	M. 12/11/30.
File Name: Dil. Factor:	10	1110-12		Data of Analysis	- 1204/00
Dir. Factor.			ESTABLISHED STATES	Date of Allalysis	12 1430

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	9.8
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	200
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	8.3
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	10
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	. 10
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	41
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Methane, dichlorofluoro-	75-43-4	94 %	300
Hexane	110-54-3	72 %	34
.alphaPinene	80-56-8	96 %	150
Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-me	18172-67-3	94 %	71
Nonanal	124-19-6	72 %	76

## 5

## AIR TOXICS LTD.

SAMPLE NAME: 7707 A&B

ID#: 9812208-03A/B Modified VOST 5041A

File Name: 9121411 Date of Collection: 12/11/5		
Surrogates	% Recovery	Method Limits
1,2-Dichloroethane-d4	99	69-112
Toluene-d8	108	72-134
4-Bromofluorobenzene	111	78-119
Dibromofluoromethane	93	70-130

SAMPLE NAME: 7707 A&B ID#: 9812208-03A/B

Modified VOST 5041A

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	Date of Collection: 12/11/98  Date of Analysis: 12/14/98
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	11
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chlorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

## TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Undecane	1120-21-4	97 %	58
Nonanal	124-19-6	Manual ID	45

Container Type: VOST Tube

ID#: 9812208-02A/B

File Name: \$1214	410	Date of Collection	= 12/11/98
Dit. Factor:	7.0	Date of Analysis:	12/14/98

Container Type: VOST Tube

Surrogates	% Recovery	Method Limits	
1,2-Dichloroethane-d4	116 Q	69-112	
Toluene-d8	101	72-134	
4-Bromofluorobenzene	102	78-119	
Dibromofluoromethane	113	70-130	

SAMPLE NAME: 7720 A&B

ID#: 9812208-02A/B Modified VOST 5041A

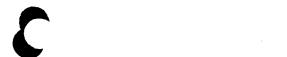
File Name: 912	1410 Date	of Collection: 12/11/98
Dil. Factor:	1.0 Date	of Analysis: 12/14/98

Compound	<u> </u>	
Chloromethane	10	Not Detected
Vinyl Chloride	5.0	Not Detected
Bromomethane	10	Not Detected
Chloroethane	5.0	Not Detected
1,1-Dichloroethene	5.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Acetone	50	Not Detected
Methylene Chloride	5.0	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected
1,1-Dichloroethane	5.0	Not Detected
Vinyl Acetate	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	5.0	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected
Carbon Tetrachloride	5.0	Not Detected
Benzene	5.0	Not Detected
1,2-Dichloroethane	5.0	Not Detected
Trichloroethene	5.0	Not Detected
1,2-Dichloropropane	5.0	Not Detected
Bromodichloromethane	5.0	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected
4-Methyl-2-pentanone	10	Not Detected
Toluene	5.0	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected
Tetrachloroethene	5.0	Not Detected
2-Hexanone	10	Not Detected
Dibromochloromethane	5.0	Not Detected
Chiorobenzene	5.0	Not Detected
Ethyl Benzene	5.0	Not Detected
m,p-Xylene	5.0	Not Detected
o-Xylene	5.0	Not Detected
Styrene	5.0	Not Detected
Bromoform	5.0	Not Detected
1,1,2,2-Tetrachioroethane	5.0	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected

### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Decane	124-18-5	81 %	58
Undecane	1120-21-4	97 %	1900
Nonanal	124-19-6	72 %	63

Q = Exceeds Quality Control limits.



SAMPLE NAME: 7715 A&B

ID#: 9812208-01A/B Modified VOST 5041A

File Name:	9121409	—⇒ Date o	f Collection: 12/11/98
Dil Factor:		Date o	f Analysis: 12/14/98*

Surrogates	% Recovery	Method Limits	
1,2-Dichloroethane-d4	96	69-112	
Toluene-d8	107	72-134	
4-Bromofluorobenzene	114	78-119	
Dibromofluoromethane	95	70-130	

Table 2-5
Summary of Ground Water Trip Blank Results2000
HIMCO Dump Superfund Site
Elkhart, Indiana

Sample Number Date Compound	EDPM4 4/18/2000 μg/L	EDPL9 4/17/2000 μg/L	EDPM5 4/19/2000 µg/L	EDPM8 4/25/2000 μg/L	EDCG1 4/25/2000 μg/L	EDPN3 4/25/2000 μg/L
Methylene chloride	0.5J	2U	0.9J	0.6J	3Ј	1J
Carbon Disulfide	1U	1U	1U	1U	1U	1U
Acetone	5U	5U	5U	5U	5U	5U

Sample Number Date Compound	EDCH0 4/26/2000 μg/L	E0057 4/27/2000 μg/L	E00FD 4/28/2000 * μg/L	E00FL 5/1/2000 μg/L	E00F6 - 5/3/2000 μg/L	EECFN9 5/3/2000 μg/L
Methylene chloride	5	0.6J	0.6J	0.9J	2	2
Carbon Disulfide	2 J	1U	1U	1U	1U	1U
Acetone	0.8J	5U	5U	5U	5U	5U

J: Reported value is estimated.

U: Analyte not detected.

Table 2-6
Summary of Compounds Detected in Soil Gas Trip Blanks - October 1999
HIMCO Dump Superfund Site
Elkhart, Indiana

Sample Tube Numbers	11011A&B	11012A	11012B	11025A&B	11101A&B	11204A&B
Sample Date	10/22/1999	10/20/1999	10/20/1999	10/21/1999	10/25/1999	10/26/1999
Compound/Units	ng	ng	ng	ng	ng	ng
Bromomethane	<10	13	<10	<10	<10	<10
Chloromethane	<10	140	20	<10	<10	<10
Methylene Chloride	34	<10	<10	<10	<10	11

Sample Tube Numbers Sample Date Compound/Units	11208A&B = 10/28/1999 ng	11221A&B 10/27/1999 ng	11316A&B 10/29/1999 .ng
Bromomethane	<10	<10	<10
Chloromethane	<10	<10	<10
Methylene Chloride	<10	<10	<10

## 2000 Ground Water Analytical Results and 1999 Soil Gas Analytical Results

## Regional Transmittal Form

### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	
R	Review of Data Received for Review on 1/12/2000
FROM: S	Stephen L. Ostrodka, Chief (HSRL-5J) for Ittre detinille Superfund Technical Support Section Natural Bygnul, 2/16/00
TO: E	Data User:
we have rev	viewed the data for the following case:
	HIMCO DUMP CIN)
urth corder CASE NUMBER	R: <u>9910376</u> SDG NUMBER:
Number and	Type of Samples: Eight UCST cartrodges
Sample Numb	pers: 1/101, 11214, 1/008, 11029, 11/02, 1/11, 1/004, 1/201
Laboratory	: A:r Taxics Lto Hrs. for Review: 9.0
Following a	are our findings:
to duta au	useable dril acceptable with the
alipiation	2 described in the attailed number
ne	hind & Byrish

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

Page 1 of 8

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN)

Case:

SDG: 9910376

Below is a summary of the out-of-control audits and possible effects on the data for this Case/SDG:

Eight VOST Cartridges, numbered 11101, 11214, 11008, 11020, 11102, 11111, 11004 and 11201, were collected on October 25, 1999 The lab received the samples on October 26, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

Reviewed by: T Sedlacek Lockheed Martin/ESAT Date: January 21, 2000

Page 2 of 8 Case:

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN) SDG: 9910376

#### 1. HOLDING TIME

Eight VOST Cartridges, numbered 11101, 11214, 11008, 11020, 11102, 11111, 11004 and 11201, were collected on October 25, 1999 The lab received the samples on October 26, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

#### 2 GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

All GC/MS tuning complied with mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

#### 3. CALIBRATION

Initial and continuing calibrations of the Volatile, standards were evaluated for target compound list and outliers are recorded on the forms included as part of this narrative.

#### 4. BLANKS

The lab ran a matrix method blank for each day the VOST cartridges were analyzed. Cartridges used for daily methods blanks were not from the same batch or sampling media. Each of the blanks was labeled as "Lab Blank". All of the blanks had no TCLs or TICs present. Because the lab did not include any sort of identification for the blanks, it would be impossible to determine which samples are associated with which blank.

#### SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The volatile system monitoring compounds were within QC required limits for recovery and retention time.

#### 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Due to the nature of the VOST cartridge matrix it is

Reviewed by: T Sedlacek Lockheed Martin/ESAT Date: January 21, 2000

Page 3 of 8

Laboratory: Air Toxics Ltd Case:

Site: Himco Dump (IN) SDG: 9910376

impossible to perform spiking on the samples. The method requires a batch certification of the VOST cartridges prior to use. The lab did not provide evidence that the pre-certification was performed. All results could be considered suspect due to possible reduced capacity or retention of the VOST media.

#### 7. FIELD BLANK AND FIELD DUPLICATE

The samples did not provide a field blank with this SDG. Due the collection method a field duplicate can not be collected.

#### 8. INTERNAL STANDARDS

The internal standards retention times and area counts were all within the required QC limits: with the exception of the area for 1,4-dichlorobenze-d4 was out of control high a Lab Blank.

#### 9. COMPOUND IDENTIFICATION

Target compounds (TCLs) and Tentatively Identified Compounds (TICs) were identified using a "best fit" library search method.

10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All target compound quantitation was properly reported.

#### 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

#### 12. ADDITIONAL INFORMATION

Method modifications which could adversely affect data quality:

- 1. "Cartridges used for daily method blank may or may not be from the same batch or sampling media" as the analyzed samples.
- 2. "Sampling media provided by the client is batch certified ahead of time, only if client provides blank cartridges"

Reviewed by: T Sedlacek Lockheed Martin/ESAT Date: January 21, 2000

Page 4 of 8

Case:

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN) SDG: 9910376

The lab failed to provide copies of the manual data manipulations preformed in this data set. The reviewer is unable to determine what effect those actions have on the overall quality of the data.

Sample 11020 was lost during analysis. The filament in the mass spectrometer broke during the analysis run. The lab was unable to generate any data or reports.

The lab reported that samples 11214a and 11214b were found in each other's containers. The lab analyzed them in the proper sequence. This should not adversely effect the data quality.

Reviewed by: T Sedlacek Lockheed Martin/ESAT Date: January 21, 2000

## CALIBRATION OUTLIERS VOLATILE TCL COMPOUNDS (Page 1 of 1)

Pg_	<u>;</u>	of	
. 6-		<sup>01</sup>	$\overline{}$

CASE\SAS#: 49/0376 ~ ~ //21/2

SITE NAME: Hin CA DIM

Instrument# MSD H		Initia	l Cal.		Cor	ntin. Cal			ntin. Ca		Со	ntin. Ca	1.	Co	ntin. Ca	ıl.
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Bromomethane	0.10	6128	1	Ĺ	10.067	1424	1R	<u> </u>		1_1		1				Ξi
Vinyl chloride	10.10		<u> </u>	L	L	L	Ī.	<u> </u>		1_1			1			Ξi
Chloroethane	10.01	10,164		Ĺ	1:126	12/10	Dly	10126	1->1,0	17/4/		<u></u>	1			Ξi
Methylene chloride	0.01	0038	115,046	Ina	L		<u> </u>		<u> </u>	<u>Ĺ</u> 1		<u></u>	1			I
Acetone	0.01			L		<u> </u>	1			1 1	·	<u></u>				$\perp$
Carbon disulfide	10.01	0.340	L	L	314	120K	17/10	26KY	1723	11/5		L	$\perp$			
1,1-Dichloroethene	0.10	<u> </u>		L		<u> </u>	<u></u>		<u></u>	1		<u> </u>	<u></u>			الله
1.1-Dichloroethane	0.20		L	L		<u> </u>	<u></u>			1_1			11			
1,2-Dichloroethene (total)			l			<u> </u>		L	<u></u>	1 1		<u> </u>	1 1			
Chloroform	0.20	! 1	-			L										
1,2-Dichloroethane	0.10	6 356			mai	15,3	11/03	L				L	1_1			
2-Butanone	0.01	1		1		1			I			1	1			1
1,1,1-Trichloroethane	0.10	10.4WH		1	0371	117.2	11/12			$\overline{1}$		1	$\dot{\mathbb{L}}^{-1}$			j
Carbon tetrachloride		16,313		1		1 14.0	17,7		1	11		1	L			1 1
Bromodichloromethane			1	Ī		1	1	10.1 43	1-246,4	KULY						Ti
1,2-Dichloropropane	1 1		1			1	Ī		 	1 1			1 1			<del>i</del>
cis-1,3-Dichloropropene	0.20			1		Ī	1			1_1			Ī			
Trichloroethene	0.30	!		Ī		1	1		İ							Ī
Dibromochloromethane	0.10	10.291	1	Ī		!	1	0,336	-15,7	17/51						Ti
1,1,2-Trichloroethane			1	1		1	1		[	1 1			L			
			3336	17/07		1	1						1 1		<del></del>	
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Bromoform	0.10	!	1	1		1	1		1	1 1			1 1	1		Ti
4-Methyl-2-pentanone			i	Ī			ī		1							$\overline{1}$
			1	i		1	Ī		Ī	1 1			1 1			Ī
Tetrachloroethene			כליוו	131.	0354	1- 70	154	0.2504	25.7	15/651						ī
1,1,2,2-Tetrachloroethane			1	1		1	1	 	1	1 1			1 1			
Toluene			!	1		1	i						1			īi
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cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene tran-1,3-Dichloropropene Bromoform 4-Methyl-2-pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane	0.20   0.30   0.10   0.10   0.10   0.10   0.01   0.01   0.01   0.20   0.50   0.50	6.412 10.759		15,5	0354			01332 01332 01332 01334 0134 0134 0134 0134 0134 0134 013								

J/R = All positive results are estimated "I" and non-detected results are unusable "R"

These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

#### CALIBRATION OF THER FORM

MENT INDIT	<u> </u>		Initial Calibration			Continui	ng Calibrat	ion	Continu	ng Calibrat	ion	Continu	ung Calibrati	(27)
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	RF	25D	RRF	³₄RSD	Q	RRF	*-RSD	Į (,	RRF	35RSD	Q	RRF	• RSD	Ú
1.1.1-Trichloroethane		15	0.446			2.371	17,2	5/05						
1.1.2.2-Tetrachloroethane	03	30												
1.1.2-Trichloroethane		15												
1.1-Dichloroethane	0.1	15												
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1.2.3-Trichloropropane		30												T
2-Dichloroethane		15	0,356			0.241	.14.3	5/5						
1.2-Dichloropropane		30												
Acetone		30												
Acrylonimile		15												
Benzene		15	07434	33.305	ر الله									
Bromodichloromethane		15	0.501						0647	-28.4	J/4			
Bro 'arm	01	30												
Bromomethane		30	0,12875	-		0,06713	47.4	1/05						
Carbon Disultide		15	0345			6.316	20.5	5/05	1.885	223	1/15			
Carbon Tetrachlonde		15	U.3135C			U.370	14.0	1/15						
Chlorobenzene	0.3	1.5	0.91214	15.92	770									
Caloroethane		15	0.1044			0.1264	-21.0	1/5	0.1768	-21.0	5/15			
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Chloromethane	01	30												
cis-1.3-Dichloropropene		15												
Dibromochloromethane		15	צטטאניט						0.3362	-15,7	J/vs			
Dibromomethane		15												
Ethylbenzene		30												
Trichlorofluoromethane		1.5	65213			CHUST	23.6	5/01	£12844	17.5	15/15			
iodomethane		15												
m tene		15	0.4654	72.694	1/1			<u> </u>						
Methylene Chlonde		15	13.236/10	15,046	5/1			ļ						
o-Yvlene		15	0.44753	22.224	7701						ļ			
Styrene		15.	0.75847	23,160	1/15			<u> </u>	1,012	15.5	7/15			
Tetrachloroethene		15	6.33774	<u> </u>	5/15				0.3509	25.7	5/05			
Toluene		30								<u> </u>				
trans-1,2-Dichloroethene		15	424263	20,6a	The				0.2801		7/5			
trans-1.3-Dichloropropene		10	0.457						0,589	28.€	1/1	L		
Trichloroethane		15												
Vinyl Chloride		30					7014							

## Affected Samples

Las ALK	1.45 AK	
11101 4/13	11102MB ILZIAB	
11008 AB	11111 A/B 11206A/3	
11214 MB	110 wu A/13	
110201718	112011113	
	11304 it/B	
	1122317/A	
	11710 413	

## CALIBRATION OUTLIERS VOLATILE TCL COMPOUNDS

Pg of S

(Page 1 of 1)

CASE\SAS#:	49	10	306	1767, (x1) xil
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J/R = All positive results are estimated "J" and non-detected results are unusable "R"

These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

#### CALIBRATION OUTLIER FORM

IN MENT MISH-N	T	T	Initial Ca	libration		Continu	ang Calibrat	on.	Contin	nng Calibrat		Continu	nua Cappian	
	DATE	TIME	10/31/		32				Contact				2012 C 311C:31	1111
	RF	%D	RRF	%RSD	Q	RRF	%RSD	Q	RRF	°5RSD	Q	RRF	°aRSD	0
1.1.1-Trichloroethane		15												1
1.1.2.2-Tetrachloroethane	0 3	30												
L.1.2-Trichloroethane		15												
1.1-Dichloroethane	0 1	15												
1.1-Dichloroethene		30												
1.2.3-Trichloropropane		30												
1.2-Dichloroethane		15												
1.2-Dichloropropane		30		_										
Acetone		30												
Acrylonitale		15												
Benzene		15						<u> </u>						T
<u>Promodichloromethane</u>	<u> </u>	15												
B torm	0.1	30												
Bromomethane		30												
Carbon Disultide		15												
Carbon Tetrachlonde		15										1		
Chlorobenzene	0.3	15												
Chloroethane		15						<u></u>	<u> </u>	<u> </u>				
nform		30				1		ļ				<u> </u>		
Chióromethane	0.1	30	U.36764	34,438							<u> </u>			
cis-1,3-Dichloropropene		15			ļ							<u> </u>		
Dibromochloromethane		15												1
Dibromomethane		15							<u> </u>					
Ethylbenzene		30						<u> </u>			<u> </u>	1		
Trichlorotluoromethane		15												
lo-1-methane		15	0.2547	14.228										
πα, ≪vlene		15												
Methylene Chlonde		15	0.30364	27.026				ļ			<u> </u>			
o-Xvlene		15	<u> </u>		<u> </u>	<u></u>								
Styrene		15	טינטיט	16.843				<u> </u>		ļ		ļ		
Tetrachloroethene	1	15		J				1.				ļ		
Toluene	ļ	30					1			<u> </u>		ļ		
trans-1.2-Dichloroethene		15					<u> </u>					ļ		
trans-1.3-Dichloropropene		10	1.45 TKJ	15, 437								<u> </u>	<b></b>	
Trichloroethane	1	15				<u> </u>	1		<u> </u>	1		-		
Vinyl Chloride		30												

## Affected Samples

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## Regional Transmittal Form

### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

	DATE:	
	SUBJECT:	Review of Data Received for Review on 1/12/2000
	FROM:	Stephen L. Ostrodka, Chief (HSRL-5J) fur Liono Ame Superfund Technical Support Section Mehmuld Bym 21/6/00
	<b>TO</b> :	Data User: PRP
	We have re	eviewed the data for the following case:
		^
,	SITE NAME	: HIMEO OUMP CIN)
urrie	CASE NUMBI	er: <u>9910301</u> sdg number:
	Number and	d Type of Samples: Eight Vost Cartridges
	Sample Nur	mbers: 11003, 11005 11005, 1104, 1104, 11019, 11021, 11022
		y: Air toxics LTO Hrs. for Review: 9.0
	Following	are our findings:
πtυ	dates a	remble and acceptation with the
nli	hirator	us described in the attendres narrati
, ,	nelia	nd & Agrid

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

Page 1 of 5

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN)

Case:

SDG: 9910301

Below is a summary of the out-of-control audits and possible effects on the data for this Case/SDG:

Eight VOST Cartridges, numbered 11003, 11005, 11008, 11009, 11012, 11019, 11021 and 11022, were collected on October 20, 1999 The lab received the samples on October 21, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

Page 2 of 5

Case:

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN) SDG: 9910301

## 1. HOLDING TIME

Eight VOST Cartridges, numbered 11003, 11005, 11008, 11009, 11012, 11019, 11021 and 11022, were collected on October 20, 1999 The lab received the samples on October 21, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

## 2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

All GC/MS tuning complied with mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

### 3. CALIBRATION

Initial and continuing calibrations of the Volatile, standards were evaluated for target compound list and outliers are recorded on the forms included as part of this narrative.

## 4. BLANKS

The lab ran a matrix method blank for each day the VOST cartridges were analyzed. Cartridges used for daily methods blanks were not from the same batch or sampling media. Each of the blanks was labeled as "Lab Blank". All of the blanks had no TCLs or TICs present. Because the lab did not include any sort of identification for the blanks, it would be impossible to determine which samples are associated with which blank.

## 5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The volatile system monitoring compounds were within QC required limits for recovery and retention time; with the exception of 11003 A/B which had the recovery of three surrogates high and one low. Therefore in samples 11003 A/B all hits should be flagged "J" and non-detects "UJ"

Page 3 of 5

Laboratory: Air Toxics Ltd Case:

Site: Himco Dump (IN) SDG: 9910301

## 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Due to the nature of the VOST cartridge matrix it is impossible to perform spiking on the samples. The method requires a batch certification of the VOST cartridges prior to use. The lab did not provide evidence that the pre-certification was performed. All results could be considered suspect due to reduced capacity or retention of the VOST media.

## 7. FIELD BLANK AND FIELD DUPLICATE

The samples did not provide a field blank with this SDG. Due the collection method a field duplicate can not be collected.

### 8. INTERNAL STANDARDS

The internal standards retention times and area counts for the VOA fraction were all within the required QC limits: with the exception of 11003 A/B in which the area of all three internal standards were out of control low. In sample 11003 A/B all results are qualified estimated. See section 5

## 9. COMPOUND IDENTIFICATION

Target compounds (TCLs) and Tentatively Identified Compounds (TICs) were identified using a "best fit" library search method.

## 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All target compound quantitation was properly reported. All dilutions were properly calculated. The upper calibration range and instrument saturation limits were properly documented and noted on the final results.

### 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

## 12. ADDITIONAL INFORMATION

Method modifications which could adversely affect data

Page 4 of 5

Case:

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN) SDG: 9910301

quality:

1. "Cartridges used for daily method blank may or may not be from the same batch or sampling media" as the analyzed samples.

2. "Sampling media provided by the client is batch certified ahead of time, only if client provides blank cartridges"

Sample 11003 A/B had numerous compounds which either exceeded the calibration range or saturated the detector. Aside from biasing the results for a particular analyte low, detector saturation could generated false positives and false negatives for the analytes which elute closely with that analyte.

IN UMENT	<del> </del>		Initial Ca				ung Calibrat			ing Calibrat		1 .	ing Calibratii	
	DATE	TIME	10/25	199 04	7_3_	10/24	149 :	55 5-4	10/0	-199 2	435	11/3/	40 csi	:0
	RF	∘.;D	RRF	°₀RSD	Q	RRF	º₀RSD	Q	RRF	°,RSD	Q	RRF	°₃RSD	10
1.1.1-Trichloroethane		15	1					J						
1.1,2.2-Tetrachloroethane	0.3	30			ļ			ļ <u>.</u>				<u> </u>		
1.1.2-Trichloroethane		15						ļ						
1.1-Dichloroethane	0.1	15			L	1						<u> </u>		
!.I-Dichloroethene	<u> </u>	30										<u> </u>		
1.2,3-Trichloropropane		30	<u> </u>											
1.2-Dichloroethane	↓	15			<u> </u>							ļ		
1.2-Dichloropropane	ļ	30				<u> </u>					ļ			
Acetone	<u> </u>	30	<u> </u>					<u> </u>						
Acrylonitrile	ļ	15		<u></u>							ļ			
Benzene		15	0,7675	33.365	T	ļ	<u> </u>					<u> </u>		
Brc ichloromethane	<u> </u>	15			<u> </u>									
Bromotorm	0.1	30												
Bromomethane		30	0.1255					<u> </u>				C. 05 323	うなつ	Ū
Carbon Disultide		1.5						<u> </u>						
Carbon Tetrachlonde		15												
Chlorobenzene	0.3	15												
C ethane		1.5	å <b>6</b> 437						21340	64.2	Ī	011400	-43.3	J
C. utorm		30												
Chloromethane	0.1	30						<u> </u>						
cis-1.3-Dichloropropene		15												
Dibromochloromethane		15												
Dibromomethane		15				<u> </u>	<u> </u>	<u> </u>				<u> </u>		<u> </u>
Ethylbenzene	1	30												
Trichlorotluoromethane		15										<u> </u>		
loc thane		15												$oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}}}}}}}}}}}}}}}}}$
m.p-Xvlene		15	0,4 64ci	22.694	2									<u> </u>
Methylene Chlonde		15	0.2386		I	<u> </u>					<u> </u>			
o-Xylene		15	04418	22226	9	<u> </u>	<u> </u>							
Styrene		15	0.75843	23.160	J									<u> </u>
Tetrachloroethene		15		16,276	J				1		<u> </u>			
Toluene		30												<u> </u>
trans-1,2-Dichloroethene		15	0.24263	20,600	1									
trans-1.3-Dichloropropene		10												
Trichloroethane		15	0.31287	17,500	7									
Vinyl Chloride		30	1											

## Affected Samples

The ilintran

1/0/9 AA	110094	
 11009/11021	110213	
11009/11024	11021B 11021AB	
 II OU 3 AB	110724	
	1101243 11025418	
	110141/13	
	110,0010	

## Regional Transmittal Form

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	
SUBJECT:	Review of Data Received for Review on 1/12/2000
FROM:	Stephen L. Ostrodka, Chief (HSRL-5J) for June Superfund Technical Support Section
TO:	Data User:
We have r	eviewed the data for the following case:
SITE NAME	: HIMCO OUMP (IN)
uerhouler CASE NUMB	ER: 9910316 SDG NUMBER:
Number an	d Type of Samples: 10 UOST Curtridges
11006	mbers: 11025, 11014, 11105, 11106, 11107, 11104, 11015, 11002 y: Airtoxics LTD Hrs. for Review: 11,0
Following	are our findings:
the data	are usualle and acceptate periodo this
the Interrator	oy and mound the minus
Colon lation	and nahme callected from the
sumples.	
M	edund Lognil,

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

Page 1 of 6

Laboratory: Air Toxics Ltd Case:

Site: Himco Dump (IN) SDG: 9910316

Below is a summary of the out-of-control audits and possible effects on the data for this Case/SDG:

Nine VOST Cartridges, numbered 11025, 11014, 11105, 11106, 11107, 11104, 11015, 11002 and 11006, were collected on October 21, 1999 The lab received the samples on October 22, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

Page 2 of 6

Laboratory: Air Toxics Ltd Case:

Site: Himco Dump (IN) SDG: 9910316

### 1. HOLDING TIME

Nine VOST Cartridges, numbered 11025, 11014, 11105, 11106, 11107, 11104, 11015, 11002 and 11006, were collected on October 21, 1999 The lab received the samples on October 22, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

## 2. : GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

All GC/MS tuning complied with mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

#### 3. CALIBRATION

Initial and continuing calibrations of the Volatile, standards were evaluated for target compound list and outliers are recorded on the forms included as part of this narrative.

## 4. BLANKS

The lab ran a matrix method blank for each day the VOST cartridges were analyzed. Cartridges used for daily methods blanks were not from the same batch or sampling media. Each of the blanks was labeled as "Lab Blank". All of the blanks had no TCLs or TICs present. Because the lab did not include any sort of identification for the blanks, it would be impossible to determine which samples are associated with which blank.

## 5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The volatile system monitoring compounds were within QC required limits for recovery and retention time; with the exception of Toluene-d8 and 4-Bromoflurobenzene in sample 11107. Therefore in sample 11107 A/B all hits should be flagged "J" and non-detects "UJ"

Page 3 of 6

Case:

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN) SDG: 9910316

## 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Due to the nature of the VOST cartridge matrix it is impossible to perform spiking on the samples. The method requires a batch certification of the VOST cartridges prior to use. The lab did not provide evidence that the pre-certification was performed. All results could be considered suspect due to possible reduced capacity or retention of the VOST media.

## 7. FIELD BLANK AND FIELD DUPLICATE

The samples did not provide a field blank with this SDG. Due the collection method a field duplicate can not be collected

## 8. INTERNAL STANDARDS

The internal standards retention times and area counts for the VOA fraction were all within the required QC limits: with the exception of Chlorobenzene-d5 area in sample 11107A/B which was out of control high. Therefore the analytes quantitated with this internal standard are biased low and hits should be flagged "J" and non-detects "UJ".

## 9. COMPOUND IDENTIFICATION

Target compounds (TCLs) and Tentatively Identified Compounds (TICs) were identified using a "best fit" library search method.

## 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All target compound quantitation for total ng were properly reported. In this SDG the laboratory suddenly started to report the sample results in  $ug/m^3$ . The laboratory did not provide either copies of the manual calculations or the volume collected for the samples. It should be noted that the apparent "correction factor" from ng to  $ug/m^3$  is not uniform for all detected analytes in the same sample. If the lab can explain or justify the seeming discrepancy the  $ug/m^3$  data is useable otherwise the  $ug/m^3$  data would be unusable and flagged "R

Page 4 of 6

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN)

SDG: 9910316

Case:

11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

12. ADDITIONAL INFORMATION

Method modifications which could adversely affect data quality:

- 1. "Cartridges used for daily method blank may or may not be from the same batch or sampling media" as the analyzed samples.
- 2. "Sampling media provided by the client is batch certified ahead of time, only if client provides blank cartridges"

The lab failed to provide copies of the manual data manipulations preformed in this data set. The reviewer is unable to determine what effect those actions have on the overall quality of the data.

In sample 11107A/B the results for Freon 11, and Styrene exceeded the calibration range. The results for Tetrachloroethene saturated the detector. Aside from biasing the results for a particular analyte low, detector saturation could generated false positives and false negatives for the analytes which elute closely with that analyte.

IN TUMENT MADIT			Initial Ca	ilibration		Continu	ing Calibrat	tion	Continu	ing Calibra	ron.	Contin	niud Caliptati	
	DATE	TIME		199 09	<u> </u>	11/62		04 25	1	114 04		Continu	mina Canonat.	CAU
	RF	%D	RRF	%RSD	0	RRF	%RSD	0	RRF	°′aRSD	0	RRF	*SRSD	0
1.1.1-Trichloroethane		1.5	CH47-3						1	169	1/25		1 4/(3)	1
1.1.2.2-Tetrachlorgethane	0.3	30									1	<u> </u>		1
1.1.2-Trichloroethane		15										<del> </del>	<del>                                     </del>	+-
1.1-Dichloroethane	01	15												+-
1.1-Dichloroethene		30												1
1.2.3-Trichloropropane		30						1						1
1.2-Dichlorgethane		15	0.3563						02407	21,2	7/5			+
1.2-Dichloropropane		30												+-
Acetone		30												
Acrylonitrile		15												
Benzene		15	0.7675	33.36	7/5									
Bromodichloromethane		15												
B torm	01	30												1
Bromomethane		30	2841.0						U105373	56.7	1/15			1
Carbon Disultide		15	07:50						031427		1/15			7
Curbon Tetrachlonde		1.5												
Chiorobenzene	0.3	15												1
Chloroethane		15	0.06707			5.13471	382	1/05	114w	-43,3	5/15			
motic		30							<u> </u>					
Cofomethane	01	30						<u> </u>						
cis-1.3-Dichloropropene		15												
Dibromochloromethane		15												
Dibromomethane		15												
Ethylbenzene	<u> </u>	30						<u> </u>						
Trichlorotluoromethane		15	a574.03						3.34647	26,9	TUS			
lodomethane		15									ļ			
n ggwylene		15	V.7644	2249				<u> </u>	<u> </u>					$\perp$
Methylene Chloride		15	0.2366	15,046	J/J			1/2						
o-Xvlene		15	4.41753	22.12	5/01						ļ			
Styrene	<u> </u>	15	075347	23,160	3/01						ļ			$\perp$
Tetrachloroethene	<u> </u>	15	0.3377	16.276	1/5									
Toluene		30												
trans-1,2-Dichloroethene		15	102426	20.600	7/05								1	
trans-1.3-Dichloropropene		10						ļ						
Trichloroethane		15												
Vinvl Chloride		30							<u></u>	1				

## Affected Samples

Las Bul Lub Auc	- I.b ALK	
Luh Buc 1105-Ag	11005 +3 111 CA HB	
11009 Am Illulity	1110443 11023/13	
 11021 AA 11107AB	11015AB 11017AB	
11022 AB 11065AB	1100243 1101343	
110124 11005/13	11000AB 11110AB	
(IUIVA	HUHAB	
 11075AB	HUNAB	
	11 11 15	

# CALIBRATION OUTLIERS VOLATILE TCL COMPOUNDS

Pg ( of 6

(Page 1 of 1)

CASE\SAS#: 4410316	
COLUMN:	
HEATED PURGE (Y/N):	<i>N</i>

LABORATORY: Hir Toyie LTD SITE NAME: Hine, DUNZ

Instrument# MAOH		Initia				ntin. Cal			ntin. Ca		Co	ntin. Ca	1.	Co	ntin. Ca	1
Date/Time:			28/44			444 C.5			H4 15				!			
	#	rf	%rsd	! *	rf	<u>  %d</u>	*	<u>rf</u>	<u>%d</u>	1 * 1	rf	960	<u>  •  </u>	<u>rf</u>	<u>%d</u>	1 * 1
Chloromethane	10.01			<del>!</del>	<u> </u>	<del> </del>	<del> </del>	<u> </u>	1	1_1		<del></del>	<del>!                                    </del>			
Bromomethane		31(21g		<u> </u>	<u> </u>	<del></del>	<u> </u>	(JUT7)	158.7	<u> IK</u> I		<u> </u>	<del>! - !</del>			
Vinyl chloride	10.10			<u> </u>	<u> </u>	1/1/2		L	<u> </u>	1 1		<u> </u>	<del></del>			<u>                                      </u>
Chloroethane		0.063		1	2137	1452	PAT	9.1H	1433	11/05		<u> </u>	<del>! - !</del>			
Methylene chloride			15,5	11.5	<u> </u>	<del> </del>	<del> </del> —		<del>!</del> -	╀		<u> </u>	1 1			<u></u>
Acetone	0.01			<u> </u>	<u> </u>	<del> </del>		2/14	<del>!</del>	1		<u> </u>	ᆜ			<u>                                     </u>
Carbon disulfide		074		<u> </u>	<u> </u>	<u> </u>	<u>!</u>	14 (ش	124.1	VIGI			$\perp \perp$			
1,1-Dichloroethene	0.10			<u> </u>			<u> </u>	Ļ	<del>!</del>	لِبلِ		<u> </u>				<u> </u>
1,1-Dichloroethane	0.20			Ļ		<u> </u>	<del>                                     </del>	<u> </u>	<u> </u>	$\perp$			$\perp$			
1,2-Dichloroethene (total)		!	<del></del>	<u> </u>	<u></u>	<u> </u>	<u> </u>	L	<u> </u>	1_1			$\perp \perp$			
Chloroform	0.20			<u> </u>	<u> </u>	<u> </u>	<u> </u>		<u> </u>	1_1			$\perp \perp$			<u> </u>
1,2-Dichloroethane		0.756				!	<u> </u>	09607	1262	17/31			$oldsymbol{oldsymbol{oldsymbol{eta}}}$			
2-Butanone	0.01	l		<u> </u>	L	<u> </u>	<u> </u>	L	<u> </u>	لبل	1			L		۱. `
1,1,1-Trichloroethane	0.10	04471		1		1	L	6.323	14.4	Must				1		
Carbon tetrachloride	0.10			<u></u>		1	1	<u> </u>	L	11			1	!		أك
Bromodichloromethane	10.20			1		1			<u> </u>					1		
1,2-Dichloropropane	1 1			1	<u>L</u>	<u> </u>	!	<u> </u>	L					1		
cis-1,3-Dichloropropene	0.20			Ĺ		1	<u> </u>	<u> </u>	<u> </u>							
Trichlomethene	[0.30]			L		1				11				1		<u></u> 1
Dibromochloromethane	0.10			1	L	1	Ī		l	<u>L1</u>						
1,1,2-Trichloroethane	0.10					Ī	Ī_		L							-
Benzene -1	0.50	0,750	33.76	5/5	!	1	}			11			1 1	1		
tran-1,3-Dichloropropene	0.10					1								1		<u> </u>
Bromoform	0.10			L	l				1	1 1			1 1			
4-Methyl-2-pentanone	0.01				!	1	1		1	$\overline{1}$			$\perp \perp$			
2-Hexanone	0.01			[		Ī .	1			11	ļ		1	1		I
Tetrachloroethene	10.20	039	14,27	11/10	]	1	;		1							1
1,1,2,2-Tetrachloroethane	10.50			1		1	1		1	1 1				1		
Toluene	10.40			Î		1	1		1	1 1	1		1 1	1		ī
Chlorobenzene	10.50			ī	l	1	<del></del>			1 1	1		1			i
Ethylbenzene	0.10			<del></del>	l		Ī		1	1 1	1		1 1	1		-
Styrene	10.30	77.784	2310	1 T/r	1	1	i		<u> </u>				1	ı		
Xylene (total)	10.30		7.710	1	i	1	<del></del>	<u> </u>	l .		<u>_</u>			i		
217.600 (102.17	10.00			<del> </del>	,	1	<del>                                     </del>	l	<u></u>	$\frac{1}{1}$			1 1	1		
Toluene-d8				<del> </del>	<u> </u>	<del>-  </del>	1		!	1 1	i		1 1	1		
Bromofluorobenzene	10.20	1		<del>                                     </del>	<u> </u>	+	-	L	1	1 1			1 1			
1,2-Dichloroethane-d4	10.20		<u> </u>	<del>                                     </del>	<del>!</del>	<del> </del>	1	L I	 !	1 1			1 1	1		
1,2-Dictior occitane-04	<del></del>	L	<u> </u>	<del></del>	1	BUL Lu		12 1/6 17	. di				1			<u></u>
Samples affected:	i				14 10	HL 111	3/1-4	1 11005	11109				<del></del>			¦
Samples affected.	ľ					11100		1/1004	1102						. <del> </del>	¦
	١					11107		11015	1100							!
						- 1100		111000	11/16							
						1/100	2	11006	,,,,,,				┼		<del> </del>	
					1/101			11011		!	<del></del>	<del></del> -				!
					1120			1110-		!		· · · · · · · · · · · · · · · · · · ·				\
	i				11014			111011			<del></del>		1			{

Reviewer's Init/Date: 15 /50/9/00

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

<sup>• =</sup> These flags should be applied to the analytes on the sample data sheets.

<sup># =</sup> Minimum Relative Response Factor

## Regional Transmittal Form

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	
	Review of Data Received for Review on 1/12/2000
FROM:	Stephen L. Ostrodka, Chief (HSRL-5J) for Attroduction Superfund Technical Support Section Reduced Deport 2/16/00
TO:	Data User:
14	
We have r	eviewed the data for the following case:
SITE NAME	: HIMCO OUMP CIN)
CASE NUMB	ER: 9910396 SDG NUMBER:
Number an	d Type of Samples: Five WUST Curtridges
Sample Nu	mbers: 1/204, 11223, 1/210; 11,25, 1/2/1
	y: Lat Airtox.cs Ers. for Review: 6
Following	are our findings:
the data a	re welder and acceptant with, the
ralipiente	us described in the Madres navadires
Arche	ud Lagrid

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

Page 1 of 6

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN)

Case:

SDG: 9910396

Below is a summary of the out-of-control audits and possible effects on the data for this Case/SDG:

Five VOST Cartridges, numbered 11204, 11223, 11210, 11225, and 1121, were collected on October 25, 1999 The lab received the samples on October 27, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

Page 2 of 6

Laboratory: Air Toxics Ltd Case:

Site: Himco Dump (IN) SDG: 9910396

## 1. HOLDING TIME

Five VOST Cartridges, numbered 11204, 11223, 11210, 11225, and 1121, were collected on October 25, 1999 The lab received the samples on October 27, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

## 2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

All GC/MS tuning complied with mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

#### 3. CALIBRATION

Initial and continuing calibrations of the Volatile, standards were evaluated for target compound list and outliers are recorded on the forms included as part of this narrative.

#### 4. BLANKS

The lab ran a matrix method blank for each day the VOST cartridges were analyzed. Cartridges used for daily methods blanks were not from the same batch or sampling media. Each of the blanks was labeled as "Lab Blank". All of the blanks had no TCLs or TICs present. Because the lab did not include any sort of identification for the blanks, it would be impossible to determine which samples are associated with which blank.

## 5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The volatile system monitoring compounds were within QC required limits for recovery and retention time; with the exception of the recovery of Bromoflurobenzene in sample 11225 which was high. Positive results in sample 11225 are qualified "J".

Page 3 of 6

Case:

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN) SDG: 9910396

## 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Due to the nature of the VOST cartridge matrix it is impossible to perform spiking on the samples. The method requires a batch certification of the VOST cartridges prior to use. The lab did not provide evidence that the pre-certification was performed. All results could be considered suspect due to possible reduced capacity or retention of the VOST media.

## 7. FIELD BLANK AND FIELD DUPLICATE

The samples did not provide a field blank with this SDG. Due the collection method a field duplicate can not be collected.

## 8. INTERNAL STANDARDS

The internal standards retention times and area counts for the VOA fraction were all within the required QC limits: with the exception of the area for 1,4-Dichlorobenzene-d4 was out of control low in sample 11210. Therefore in sample 11210 positive results are qualified "J" and non-detects are qualified "UJ"

## 9. COMPOUND IDENTIFICATION

Target compounds (TCLs) and Tentatively Identified Compounds (TICs) were identified using a "best fit" library search method.

10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All target compound quantitation was properly reported.

## 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

## 12. ADDITIONAL INFORMATION

Method modifications which could adversely affect data quality:

1. "Cartridges used for daily method blank may or may not be from the same batch or sampling media" as the analyzed

Page 4 of 6

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN)

Case: SDG: 9910396

samples.

2. "Sampling media provided by the client is batch certified ahead of time, only if client provides blank cartridges"

The lab failed to provide copies of the manual data manipulations preformed in this data set. The reviewer is unable to determine what effect those actions have on the overall quality of the data.

## CALIBRATION OUTLIERS **VOLATILE TCL COMPOUNDS**

	(Page 1 of 1)		d	,
CASEISAS#: 49 103 46		LABORATORY:_	Hir tuying	LTI
COLUMN:		SITE NAME:	Hime De	7
HEATED PURGE (Y/N):				

Instrument 1150h		Initia	l Cal.		Cor	ntin. Cal		Co	ntin. Ca	1.	C	ontin. Ca	1.	Contin. Cal.			
Date/Time:		10/3	1/34 0	OB	11/6	194 0	123										
	#	rf	%rsd	*		∫ %d	1 *	rf	<b>1</b> %d		rf	1 %d	*	rf	%d		
Chloromethane	0.01	3,3/5	3464	156		<u> </u>	$\perp$		1	1_1					1	1	
Bromomethane	10.10				L	Ī			<u> </u>	1_1		1				Ī	
Vinyl chloride	10.10	L	Ĺ		<u> </u>	Ī	1		1	1_1					L	1	
Chloroethane		linuy				1-21,0	17/6		<u> </u>	1		1			L	L	
Methylene chloride	0.01	11303	12706	17/25	1	1			<u> </u>	لــــــــــــــــــــــــــــــــــــــ						1	
Acetone	10.01		1	1	1	Ī			L						1	L	
Carbon disulfide	_[0.01	¥-ריט	Ī	Ī	04653	1-22.3	17/2		<u> </u>	1		1			L	L	
1,1-Dichloroethene	0.10		]	1	L	Ī			L			1	$\perp \perp$		L	Ī	
1,1-Dichloroethane	0.20			1					L						L	1	
1,2-Dichloroethene (total)	_1 1			Ī	1		Ī		l			1	1. 1			1	
Chloroform	0.20			!					<u> </u>	LI						Ī	
1,2-Dichloroethane	0.10			!		1			<u></u>				1!			1	
2-Butanone	0.01			ī		1	1		1							-	
1,1,1-Trichloroethane	0.10			Ī		Ī	1			1_1			11			. —	
Carbon tetrachloride	10.10			1		1	1 1		1			1	1 1		1	ī	
Bromodichloromethane		054		ī	0243	1-28.4	1/65		1			1			1	1	
1,2-Dichloropropane	1 1			Ī		i	1 1		1	<u>L_1</u>		1			]	Ī	
cis-1,3-Dichloropropene	0.20			1		Ī						1	$\Box$		Ĺ	ī	
Trichloroethene	10.30			ì		1	1		Ī	$\overline{L}$		1				ī	
Dibromochloromethane	0.10	294		Ī	1376	1-15.7	The			$\overline{L}_{-}\overline{I}$		1			L.	Ī	
1,1,2-Trichloroethane	0.10			İ		1	1		1	$\overline{L}$		1	L		1		
	0.50			1		Ī	1 1		1	$\overline{1}$		1	1 1		1		
tran-1,3-Dichloropropene	0.10		<u> </u>	Ì	<u> </u>				1	<u> </u>		1	1 1			1 ~	
Bromoform	0.10			]	]	]	1 1		j	$\overline{1}$		]				1	
4-Methyl-2-pentanone			22.53	114		1	1 1		1			1	1 1		ī	ī —	
2-Hexanone			34111			<u> </u>	1 1			1		i	1		1	ī	
Tetrachloroethene		0274		1	1350	H25.7	Jui		1	1		1			1	ī	
1,1,2,2-Tetrachloroethane	0.50		!	1	 	1	1 1		1			Ī			<u> </u>	1	
Toluene	0.40		i	1		†	1		1	1 1		1	1 1		ł	ī	
Chlorobenzene	10.50		<u> </u>	<del>                                     </del>		1	1		1	1 1		1			1	i	
Ethylbenzene	0.10		! !	<u> </u>	ļ	1	1 1		İ			1	1 1		1	<del>: -</del>	
Styrene			16,48	17/1	1	1-150	11/15		1	1 1		Ī	1 1		1	_	
Xylene (total)	0.30		1	1-7-7	1	1	1 1		<u> </u>	1 1		<del></del>			1	1	
Aviene (total)	1 . 1	<u></u>	<u> </u>	<del> </del>	<u> </u>	<del></del>	+-+		<del></del>	1 1		ı	1 1		1	<del> </del>	
Toluene-d8	+		<u>.                                    </u>	+-	1	<del>                                     </del>	1 1		<del></del>			<del>i                                    </del>	<del></del>		<del></del> -	<del>                                     </del>	
Bromofluorobenzene	[0.20	1	!	+	<u> </u>	1	1 1		<del>                                     </del>	1 1		1	<u> </u>		<del></del>	<del></del>	
1.2-Dichloroethane-d4	1 0.20	<del>1</del> _	<u>.                                    </u>	<del> </del>	<u>'</u>	1	+-+		<del></del>	1 1		1	1 1		<u> </u>	<del></del>	
1,2-Dichioroeulane-04					11 / /	<del></del>	1		<u> </u>			ــــــــــــــــــــــــــــــــــــــ	<del>1</del> j		<del></del>		
Samples affected:	į				Labe			<del></del>					1				
Samples affected:	Ţ					(2 112 a							l				
	)					112	<del>Y  </del>			<u>-</u>							
					10064						<del></del>			<del></del>			
	j				111201												
			<del></del>		4204									1			
	ļ	ļ			يحظنا							<del></del>		<u> </u>			
					171210									<u> </u>			
	'	l			112/1									L			

Reviewer's Init/Date 1715 1/20/201

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

MENT MISON !			Initial Ca	libration		Continu	ng Calibrati	on	Continu	ung Calibrat	าดก	Continu	uine (Tallibrai)	ott
	DATE	TIME	10/3	149 00	32	1./05	199 V	603						
	RF	%D	RRF	%RSD	Q	RRF	º5RSD	Q	RRF	3/3RSD	Q	RRF	°.RSD	Q
1.1.1-Trichloroethane	<u> </u>	15						<u> </u>			<u> </u>			
1.2.2-Tetrachloroethane	03	30								1				
: : .2-Trichloroethane		15												
: 1-Dichloroethane	0.1	15									ļ			
1.1-Dichloroethene		30						<u></u>						
1.2.3-Trichloropropane		30						<u> </u>			ļ			
i 2-Dichloroethane		15												
1.2-Dichloropropane		30												
Acetone		30						<u> </u>	<u> </u>					
Acrylonitrile		15						<u> </u>						
Benzene		15							<u> </u>			<u> </u>		
Bromodichloromethane		15	0,501			U.C433	-24.4	1/0	ļ <u>.</u>					
Brc smm	0.1	30								<u> </u>		<u> </u>		
Bromomethane		30								<u> </u>		<u> </u>		
Carbon Disultide		15	0.7239			0.4453	- }2.3	5/0	<u> </u>	<u> </u>				
Carbon Tetrachlonde		15							<u> </u>					
Morobenzene	0.3	15										<u> </u>		
Chloroethane		15	0.1044			0.1264	-21.0	J/1			<u> </u>			
( jorm		30												
Chioromethane	01	30	636X4	34.44	5/5			<u> </u>						
2:s-1.3-Dichloropropene		15												
Dibromochloromethane		15	0.2900			v.336	-15.7	T/us						
Dibromomethane		15							ļ					1_
Ethylbenzene		30												
Trichlorofluoromethane		15	63,000			0.14439	17.5	u/47					<u> </u>	
Iodomethane		15	(25773	14,228	5/15			<u> </u>	<u> </u>	1				
m.u evlene		1.5			}	1								
Methylene Chlonde		15 .	032364	> 7.026	1/05				1					
o-Xvlene		15						<u></u>						
Styrene		15	0.87761	16.583	5/05	1,0126	-15.5	1/5	<u> </u>		<u> </u>			
Tetrachloroethene		15	10.274			0.3509	T	7/1		1		_		
Toluene		30										_		
trans-1.2-Dichloroethene		15	0.741			0.240	-16.0	7/03						
trans-1.3-Dichloropropene		10	0,4576	17.637	1/5		-18.8	3/57						
Trichloroethane		15												$\perp$
Vinvl Chloride		30												

## Affected Samples

Lab AVE	
11102A/B 11200A/B	
ILLI MB IDIG MB	
110641/13	
11201MB 11204MB	
11223/1/8	
 11710 4/18	

## Regional Transmittal Form

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	
SUBJECT:	Review of Data Received for Review on 1/12/2000
FROM:	Stephen L. Ostrodka, Chief (HSRL-5J) for Sterior Superfund Technical Support Section Ardunyl 2 Ryw
TO:	Data User:
No have w	eviewed the data for the following case:
SITE NAME	: HIMCO OUMP CIN)
CASE NUMB	ER: SDG NUMBER: 4910432
Number an	d Type of Samples: Nine UUST Curtuidge
Sample Nu ([7]7]1 Laborator	Imbers: 1/221, 1/26, 1/2/8, 1/2/6, 1/2/9, 1/2 1724  Air Toxics Lan Hrs. for Review: 10
Following Att me	e usuble and acceptable unti. Ite
A. Risa Tan	is described in the attraction inveration
•	·
nu	and & Bynd

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

Page 1 of 8

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN)

SDG: 9910432

Case:

Below is a summary of the out-of-control audits and possible effects on the data for this Case/SDG:

Nine VOST Cartridges, numbered 11221, 11206, 11218, 11216, 11215, 11215, 11219, 11213, 11217 and 11224, were collected on October 27, 1999 The lab received the samples on October 28, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

Page 2 of 8

Case:

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN) SDG: 9910432

### 1. HOLDING TIME

Nine VOST Cartridges, numbered 11221, 11206, 11218, 11216, 11215, 11215, 11219, 11213, 11217 and 11224, were collected on October 27, 1999 The lab received the samples on October 28, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

## 2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

All GC/MS tuning complied with mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

## 3. CALIBRATION

Initial and continuing calibrations of the Volatile, standards were evaluated for target compound list and outliers are recorded on the forms included as part of this narrative.

## 4. BLANKS

The lab ran a matrix method blank for each day the VOST cartridges were analyzed. Cartridges used for daily methods blanks were not from the same batch or sampling media. Each of the blanks was labeled as "Lab Blank". All of the blanks had no TCLs or TICs present. Because the lab did not include any sort of identification for the blanks, it would be impossible to determine which samples are associated with which blank.

## 5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The volatile system monitoring compounds were within QC required limits for recovery and retention time; therefore the results are acceptable.

Page 3 of 8

Case:

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN) SDG: 9910432

## 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Due to the nature of the VOST cartridge matrix it is impossible to perform spiking on the samples. The method requires a batch certification of the VOST cartridges prior to use. The lab did not provide evidence that the pre-certification was performed. All results could be considered suspect due to possible reduced capacity or retention of the VOST media.

## 7. FIELD BLANK AND FIELD DUPLICATE

The samples did not provide a field blank with this SDG. Due the collection method a field duplicate can not be collected.

## 8. INTERNAL STANDARDS

The internal standards retention times and area counts for the VOA fraction were all within the required QC limits: with the exception of the areas for Chlorobenzene-d5 and 1,4-Dichlorobenzene-d4 in sample 11215 out of control low and the area of 1,4-Dichlorobenzene-d4 in a lab blank was out of control high. Therefore the positive results for those compounds quantitated with Chlorobenzene-d5 and 1,4-Dichlorobenzene-d4 in sample 11215 are qualified "J" and compounds quantitated with 1,4-Dichlorobenzene-d4 in the lab Blank hits are qualified "J" and non-detects are qualified "UJ"

## 9. COMPOUND IDENTIFICATION

Target compounds (TCLs) and Tentatively Identified Compounds (TICs) were identified using a "best fit" library search method.

## 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All target compound quantitation was properly reported.

### 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

Page 4 of 8

Laboratory: Air Toxics Ltd

Case:

Site: Himco Dump (IN)

SDG: 9910432

## 12. ADDITIONAL INFORMATION

Method modifications which could adversely affect data quality:

- 1. "Cartridges used for daily method blank may or may not be from the same batch or sampling media" as the analyzed samples.
- 2. "Sampling media provided by the client is batch certified ahead of time, only if client provides blank cartridges"

The lab failed to provide copies of the manual data manipulations preformed in this data set. The reviewer is unable to determine what effect those actions have on the overall quality of the data.

# CALIBRATION OUTLIERS VOLATILE TCL COMPOUNDS

Pg\_5 of 5

(Page 1 of 1)

CASE\SAS#:	4910432
COLUMN:	
HEATED PURC	GE (Y/N): n/

SITE NAME: Him Daniel

Instrument# (450 N		al Cal.			itin. Cal		<u> </u>	ontin Ca	ıl.	<u>C</u> c	ntin. Ca	1	Contin. Cal.		
Date/Time:	1 10/3//49 0231					1			<u> </u>			<u> </u>			
		1 1111	1 *	rf	<b>1</b> %d		<u>rf</u>	%d	1.	rf	%d	*	rf	%d	1
Chloromethane	10.01/367	13492	<u>tl.</u>	<u> </u>		<u> </u>	L			1	1	<u> </u>	L	<u></u>	1
Bromomethane	[0.10]	1	<u>L_</u>	<u> </u>	<u> </u>		<u> </u>			<u> </u>			<u> </u>	<u> </u>	1
Vinyl chloride	[0.10]	1	<u>L</u>	<u> </u>	L	1	<u> </u>		_!	<u> </u>	1	Ш.	L	<u></u>	1
Chloroethane	[0.01]	<u></u>	1	<u> </u>	<u></u>	1	<u> </u>		1	L	<u> </u>	1		<u> </u>	$\perp$
Methylene chloride	10.01 10.363	1:242	17	<u>L</u>	L	1	<u> </u>	1		<u> </u>	<u> </u>				1
Acetone	[0.01]	<u> </u>	1	L			L		<u></u>	<u> </u>	1	1		1	1
Carbon disulfide	0.01	<u> </u>		<u> </u>	<u></u>		L		1		<u> </u>	1		1	
1,1-Dichloroethene	[0.10]	<u> </u>	1	1		1	<u></u>	1	1	<u></u>	<u> </u>			1	1
1,1-Dichloroethane	[0.20]	<u>i</u>	<u> </u>		<u> </u>	1	<u> </u>		1						L
1,2-Dichloroethene (total)		<u> </u>		1	<u> </u>	1	<u> </u>		1		<u> </u>				1
Chloroform	[0.20]	<u> </u>	1	<u></u>		1	1	<u> </u>	1		<u> </u>				$\perp$
1.2-Dichloroethane	[0.10]	<u> </u>	1			1					1				Ī
2-Butanone	[0.01]	L		L	1		<u> </u>	1			L	$\Box$		L	Ī
1,1,1-Trichloroethane	[0.10]	1	Ĺ	1	1						L			<u> </u>	Ī
Carbon tetrachloride	0.10	Ī	Ι.		1	Ī		1						<u> </u>	Ī
Bromodichloromethane	10.20					1	Ĺ	Ī			L.				Ī
1,2-Dichloropropane		Ī		Ī	1	L		Ì	Ī		L			L	Ī
cis-1,3-Dichloropropene	10.20 157	1/258	15	10.492	3710	1			1		1	1		1	ī
Trichloroethene	0.30		Ī			1		Ī	1					L	Ī
Dibromochloromethane	0.10	L				1	[	Ī	1		1			1	Ī
1,1,2-Trichloroethane	0.10	ŀ		1	1	Ī	ĺ	Ī			L			1	Ī
Benzene	[0.50]			1	1	Ī		1	1		L				Ī
tran-1,3-Dichloropropene	0.10			1	1	1	[	Ī	1		<u> </u>	<u> </u>			Ī
Bromoform '	0.10	I	Ī.	L	l	Ì		1			1			<u> </u>	L
4-Methyl-2-pentanone	10.01 4:157	13713	p	L		1		1			1			L	Ī
2-Hexanone	10.01 2/043	134111	11	1	1	L	]	1							Ī
Tetrachloroethene	10.20	1	1	1	1	1					L			I	Ī
1,1,2,2-Tetrachloroethane	10.50	1	1	1	1	1	[	1	1		1.	1		I	T
Toluene	10.40		Ī		1	Ī	1	ī	Ī			1		1	T
Chlorobenzene	[0.50]	i	ī		l	1	1	Ī	1		1			1	ī
Ethylbenzene	0.10	1	ì	i i		T	1	1	Ī		1	1		1	Ť
Styrene	10.30 4.477	116 4883	ir	1	1	ī		Ī	Ī					1	ī
Xylene (total)	10.301		1	1	1	1	1	Ī	Ī					1	ī
	1 1	Ī	ī	]	1	Ī	Ī	Ī	Ī					L	Ī
Toluene-d8	1 1	1	ī	i	Ī	Ī	<u> </u>	1	Ī					1	Ī
Bromofluorobenzene	[0.20]	i	1	Î	]	1	]	1	Ī		1.	1		1	ī
1,2-Dichloroethane-d4	1 1	j	ī	1	;	1	į	1	1		)	1		1	ī
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Samples affected:	ļ <del></del>			11107		/1	1								_
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	!			111201	(1-1	<u> </u>	<del></del>			<u> </u>					
	ļ			111204			<u> </u>	<del></del>		l		-	i .	<del></del>	_
				111223			<del></del>			<u> </u>			! !		_
	ļ			111210			1			<u> </u>			<u>.                                    </u>		_
	ļ	·····		111724			<del> </del>						L		_

Reviewer's Init/Date: 1/20/24

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

• = These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

INSTRUMENT MOD MAL			Initial Ca	ilibration		Continu	ang Calibrati	ion	Continu	nag Culibrati	!on	Continu	ung Chian in
	DATE	TIME	10/3/	79 i6	3)	7	8/17 64				<del></del>	1	110 C 211
	RF	°4D	RRF	%RSD	Q	RRF	"%RSD _	Q	RRF	%RSD	To	RRF	°JRSD
1.1.1-Trichloroethane		15									1		1 1
1.1.2.2-Tetrachloroethane	0.3	30								1	1		
1.1.2-Trichloroethane		15										1	
1.1-Dichloroethane	01	15										1	1
1.1-Dichloroethene		30									1		
1.2.3-Trichlorogragane		30											
1.2-Dichloroethane		15											
1.2-Dichloropropane		30											
Acetone		30										1	
Acrylonimie	<u> </u>	15											
Benzene		15											
Bromodichloromethane		15	0.1197	25.466	7/05								
Bromotorm	0.1	30											
Bromomethane		30											
Carbon Disultide		13											
Carbon Tetrachlonde		1.5											
Chlorobenzene	0.3	15											
Chloroethane		15											
Chloroform		30											
Chloromethane	101	30	03016	34,42	5/5				<u> </u>				
cis-1,3-Dichloropropene		15								<u> </u>			
Dibromochloromethane	<u> </u>	15								<u> </u>	<u> </u>		
Dibromomethane	<u> </u>	15											
Ethylbenzene		30											
Trichlorofluoromethane		15											
lodomethane		15	01254	14,22	This				1				
m.p-Xvlene		15_								<u> </u>			
Methylene Chlonde		15	V.3036	27.026	JUI				<u> </u>				
o-Xviene		15			1								
Styrene		15	2477	16,445	JUT		T						
Tetrachloroethene		15											
Toluene		30											
trans-1.2-Dichloroethene		15											
trans-1.3-Dichloropropene		10	0.4574	117,637	1701								
Trichloroethane		15							T				
Vinvi Chloride	I	30											

Affected Samples

	Lub Buk	
	1102 119	
	1111 HA 11711AB	
	1136-1 A/B 11746 H/R	**************************************
	1120/A112 (12/5/1B)	
	1004 1/3	
	1122311/13	
1	I his itin	

## **CALIBRATION OUTLIERS** VOLATILE TCL COMPOUNDS

(Page 1 of 1)

CASE\SAS#: 49104 31 HEATED PURGE (Y/N):

Instrument# MjD/+	+		Cal.	3/:	Contin. Cal.				ontin. Ca	11.	Co	ntin. Ca	Contin. Cal.			
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Vinyl chloride	10.10			1		<del></del>	1-1		<del> </del>	<del>-}</del>	<u> </u>	1	<del></del>		<u> </u>	<del> </del>
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Methylene chloride	0.01						1		<del> </del>	<del> </del>		<del>                                     </del>	4		<u> </u>	
Acetone	0.01			<u> </u>			$\vdash$		<del> </del>			<del> </del>	+	<u></u>	<del></del>	<del>-</del>
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1.1-Dichloroethene	0.10								<del> </del>	<del> </del>		<del>                                     </del>			<del> </del>	<del> </del>
1,1-Dichloroethane	0.20			<u></u>				<del></del>	<del> </del>	+		1	<del>                                     </del>		<u> </u>	<del> </del>
1,2-Dichloroethene (total)				$\vdash$			<del>  </del>		<del> </del>	-		<u> </u>	+		<u> </u>	<del></del>
Chloroform	10.201						<del>                                     </del>		<del> </del>	+ -		<u> </u>	+		ļ	<u> </u>
1,2-Dichloroethane	0.10			Ļ			<del>! -                                   </del>		+	<del>                                     </del>			1	· · · · · · · · · · · · · · · · · · ·	<u> </u>	<del>-</del>
2-Butanone	0.01					<del></del>	⊢╀		<del>                                     </del>	1	<u> </u>	<u> </u>	+		<u> </u>	+-
1.1.1-Trichloroethane	0.10			<u> </u>			<del>                                     </del>		<del> </del>	1	<del></del>	<del> </del>	لــــــــــــــــــــــــــــــــــــــ		<del> </del>	<u> </u>
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Bromodichloromethane	<u> [0.20]</u>			Ļ			<del>! !</del>		<del> </del>	<u> </u>	<del></del>	<u> </u>	إــــا		ļ	
1,2-Dichloropropane							<u> </u>		<del> </del>	+		<u> </u>	<u> </u>		<u> </u>	<u> </u>
cis-1,3-Dichloropropene	0.20			<u> </u>			<del>                                     </del>		<del></del>	1		<u> </u>	لــــــــــــــــــــــــــــــــــــــ		<del> </del> -	+-
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tran-1,3-Dichloropropene	0.10			<u> </u>			<del>                                     </del>		<del> </del>	<u> </u>		<del>!</del>	لــــــــــــــــــــــــــــــــــــــ	<u> </u>	<del>!</del> -	<u> </u>
Bromoform '	0.10		<u> </u>	<u> </u>			$\sqcup$		<del></del>	1		<u> </u>	<del></del>		<u> </u>	<u> </u>
4-Methyl-2-pentanone	0.01			<u> </u>			$\sqcup$		<del></del>	<del></del>		!	لبل		<del>!</del>	<u> </u>
2-Hexanone	0.01		<u> </u>	<u> </u>			لِــــــلِ		<del> </del>	<u> </u>		<del> </del>	Ļ		<del>!</del>	<del></del>
Tetrachloroethene	[0.20]			<u> </u>	<u> </u>		1_1		<del> </del>	<u> </u>		!	1		<u> </u>	<u> </u>
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Toluene	0.40			<u> </u>					<del> </del>			<u> </u>	ــــــــــــــــــــــــــــــــــــــ		<u> </u>	<u> </u>
Chlorobenzene	0.50		<u></u>	<u> </u>					<u> </u>			<u> </u>	لسل	<u>.</u>	<u> </u>	<u> </u>
Ethylbenzene	0.10		<u> </u>	<u>L</u>		<u> </u>	$\perp$ $\perp$		<u> </u>			1	<u> </u>		Ь	ᆚ
Styrene	0.30		L	L	L					<u> </u>		<u> </u>	<u> </u>	<u> </u>	1	
Xylene (total)	0.30		i	<u> </u>	<u> </u>							1			l	
	1		L	1	L		لــل		<u> </u>	<u> </u>		<u> </u>	<del></del>		<u> </u>	Ļ
Toluene-d8	1		L	<u></u>	<u> </u>				<del> </del>	<u> </u>		<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Bromofluorobenzene	0.20			L	L	L			<u> </u>	<del> </del>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
1,2-Dichloroethane-d4			<u> </u>	1	L	<u></u>		L		<u> </u>	<u> </u>			<u> </u>	<u> </u>	
	1				<del></del>			<u> </u>		•				<u> </u>		
Samples affected:	ł				1 -ub						<u> </u>			<u> </u>		
	1				11122	113	10	L,			<u> </u>			<u>L</u>		
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	- 1				111215	_		<u> </u>			<u> </u>			<u> </u>		
	ļ				1121	t		<u> </u>			<u> </u>					
	1				111213						1			<u> </u>		
	i				1017			<u></u>			1			<u> </u>		
					11226											
Reviewer's Init/Date: 225																

J/R = All positive results are estimated "I" and non-detected results are unusable "R"

# = Minimum Relative Response Factor

These flags should be applied to the analytes on the sample data sheets.

INSTRUMENT DISON			Initial Cal	Libration	Í	Continu	ne Calibrat	ton	Continu	ing Calibrati	on	Continu	mark (Tapla 1 to
	DATE	TIME	11/05/9		7		199					Continu	(12 (3))
	RF	%D	RRF	%RSD	Q	RRF	"RSD	Q	RRF	%RSD	Q	RRF	°,RSD
L.L.i-Trichlorgethane		15											
1.1.2.2-Tetrachloroethane	0.3	30											
1.1.2-Trichloroethane		15						<u> </u>	<u> </u>	<u> </u>			
1.1-Dichloroethane	0.1	15						<u> </u>					
1.1-Dichloroethene		30						<u> </u>		ļ			
1.2.3-Trichloropropane	1	30							<u> </u>	-		ļ	
1.2-Dichloroethane		15						<u> </u>	<u> </u>	ļ	<u> </u>		
1.2-Dichloropropane		30						<u> </u>	<u> </u>	<b></b>		-	
Acetone		30							J	<b></b>	ļ		
Acrylonimie	<u> </u>	15						ļ		ļ	<u> </u>		
Benzene	ļ	15	1,1.99	15476	Ilvs		<u> </u>	ļ	<u> </u>		ļ		
Bromodichloromethane		15			·			ļ	ļ	<u> </u>	<u> </u>	ļ	
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Bromomethane		30	217174	37.05	5/05		ļ	<u> </u>	<u> </u>	<u> </u>	ļ		
Carbon Disultide		15						<u> </u>	J	<u> </u>	<u> </u>		
Carbon Tetrachlonde		15							<u> </u>	<u> </u>	ļ	<u> </u>	
Chlorobenzene	03	15					ļ	ļ		<u> </u>	<del> </del>		ļ
Chloroethane	ļ	15					<u> </u>	ļ		<u> </u>	ļ		ļ
Chloroform		30	ļ	ļ			ļ	ļ			ļ	-	
Chloromethane	101	30	ļ				<u> </u>				ļ	ļ	ļ
cis-1.3-Dichloropropene	<del></del>	15	<u> </u>					ļ		<u> </u>	<del> </del>	<del> </del>	ļ
Dibromochloromethane		15	<u> </u>				<u> </u>	ļ		<del> </del>	<del>}</del>	<del> </del>	
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Ethvibenzene		30				\	<del> </del>	<del></del>		-	<del>}</del>	-	
Tachlorofluoromethane		15					ļ	<u> </u>	<u> </u>	<u> </u>	ļ	ļ	
Iodomethane	<del></del>	15	0.20346	36,425						<del> </del>	<del> </del>	<del> </del>	
m.p-Xvlene		15				L		ļ		ļ	<del> </del>	-	
Methylene Chlonde	<del></del>	15	<u> </u>	<u> </u>	ļ	<u> </u>	<u> </u>	ļ		ļ	ļ	<del> </del>	
o-Xvlene	<del></del>	15					1		ļ	<del> </del>	<del> </del>	-	
Styrene		15	<u> </u>			<u> </u>	<del> </del>			-	<del> </del>	<del></del>	
Tetrachloroethene		15	<u> </u>			-			<del> </del>	<b></b>	<del> </del>	<del></del>	
Toluene		30	<del> </del>	<u> </u>	<u> </u>	<u> </u>	<b>↓</b>	<del></del>		-	<del> </del>	-	
trans-1,2-Dichloroethene		15		1			<del> </del>		<u> </u>	<u> </u>	1.	-	
trans-1.3-Dichloropropene		10	1							<del> </del>		<del> </del>	1
Trichlorgethane		15		ļ	<u> </u>	<u> </u>		<del> </del>				-	-
Vinyl Chlonde		30		_		1				L			

## Affected Samples

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1177144	
11210 MB	- I was in
11215/1/13	
11>14 17/13	
 (1213/1/13	
 1217#/B	
11224 2/18	

## Regional Transmittal Form

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

	DATE:	
	SUBJECT:	Review of Data Received for Review on 1/12/2000
	FROM:	Superfund Technical Support Section Andura & Byris
	TO:	Data User:
	we have r	eviewed the data for the following case:
	SITE NAME	: HIMCO OUMP CIN)
wi	CASE NUMB	ER: 4910444 SDG NUMBER:
	Number an	id Type of Samples: Seven VOST curtridge
•	Sample Nu	imbers: 11204, 11310, 11205, 11203, 11222, 11212, 11207
	Laborator	ry: Air toxics LTO Ers. for Review: 4
	Following	are our findings:
		insulte and acceptation with the
ia	riatin	us described in the attordres marratine.
•	no	hard I Agril
		arphi

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

Page 1 of 6

Case:

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN) SDG: 9910444

Below is a summary of the out-of-control audits and possible effects on the data for this Case/SDG:

Seven VOST Cartridges, numbered 11208, 11310, 11205, 11203, 11222, 11212, and 11207, were collected on October 28, 1999 The lab received the samples on October 29, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

Page 2 of 6

Case:

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN) SDG: 9910444

## 1. HOLDING TIME

Seven VOST Cartridges, numbered 11208, 11310, 11205, 11203, 11222, 11212, and 11207, were collected on October 28, 1999 The lab received the samples on October 29, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

## 2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

All GC/MS tuning complied with mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

## 3. CALIBRATION

Initial and continuing calibrations of the Volatile, standards were evaluated for target compound list and outliers are recorded on the forms included as part of this narrative.

### 4. BLANKS

The lab ran a matrix method blank for each day the VOST cartridges were analyzed. Cartridges used for daily methods blanks were not from the same batch or sampling media. Each of the blanks was labeled as "Lab Blank". All of the blanks had no TCLs or TICs present. Because the lab did not include any sort of identification for the blanks, it would be impossible to determine which samples are associated with which blank.

## 5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The volatile system monitoring compounds were within QC required limits for recovery and retention time; therefore the results are acceptable.

Page 3 of 6

Case:

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN) SDG: 9910444

## 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Due to the nature of the VOST cartridge matrix it is impossible to perform spiking on the samples. The method requires a batch certification of the VOST cartridges prior to use. The lab did not provide evidence that the pre-certification was performed. All results could be considered suspect due to possible reduced capacity or retention of the VOST media.

## 7. FIELD BLANK AND FIELD DUPLICATE

The samples did not provide a field blank with this SDG. Due the collection method a field duplicate can not be collected.

## 8. INTERNAL STANDARDS

The internal standards retention times and area counts for the VOA fraction were all within the required QC limits: with the exception of:

The area for 1,4-Dichlorobenzene was out of control low in samples 11310, and 11208 and high in a lab blank.

The area for 1,4-Dichlorobenzene was out of control high in a lab blank.

The area of Chlorobenzene-d5, Fluorobenzene and 1,4-Dichlorobenzene were out of control low in sample 11208.

Therefore in the above listed samples positive results are qualified estimated "J" and non-detects are qualified "UJ"

## 9. COMPOUND IDENTIFICATION

Target compounds (TCLs) and Tentatively Identified Compounds (TICs) were identified using a "best fit" library search method.

## 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All target compound quantitation was properly reported.

## 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

Page 4 of 6

Laboratory: Air Toxics Ltd

Case:

Site: Himco Dump (IN)

SDG: 9910444

## 12. ADDITIONAL INFORMATION

Method modifications which could adversely affect data quality:

- 1. "Cartridges used for daily method blank may or may not be from the same batch or sampling media" as the analyzed samples.
- 2. "Sampling media provided by the client is batch certified ahead of time, only if client provides blank cartridges"

The lab failed to provide copies of the manual data manipulations preformed in this data set. The reviewer is unable to determine what effect those actions have on the overall quality of the data.

# CALIBRATION OUTLIERS VOLATILE TCL COMPOUNDS

Pg 5 of C

(Page 1 of 1)

CASE\SAS#:	-(410444
COLUMN:	
HEATED PURGE	(Y/N): /

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SITE NAME:	14 M 24	Puna	-

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Chloromethane	0.01		<u> </u>	<u> </u>	L	<u> </u>	<u> </u>	<u> </u>					لحط		<u></u>		
Bromomethane	0.10		1	<u>L.</u>		<u>L</u>	<u> </u>	<u>L</u>			<u> </u>	<u> </u>	1_1		<u></u>		
Vinyl chloride	0.10		<u></u>			<u> </u>	L	L	<u> </u>	لبل		<u> </u>	<u> </u>			1	
Chloroethane	0.01		1	1	<u> </u>	<u> </u>	<u></u>	<u></u>	<del></del>	لــــــــــــــــــــــــــــــــــــــ	·				L	1	
Methylene chloride	0.01		<u></u>	<u>L.</u>	1	<u> </u>	<u></u>	L	1	لــــــــــــــــــــــــــــــــــــــ		<u> </u>					
Acetone	0.01		1		<u></u>		<u> </u>	L	<u> </u>			<u> </u>			<u>L</u>		
Carbon disulfide	0.01		1	1						لــــــــــــــــــــــــــــــــــــــ						L	
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1,2-Dichloroethene (total)			L	<u> </u>					1							Ī	
Chloroform	0.20		1	Ī Ī					1	$L_{-}I$		1				ī	
1,2-Dichloroethane	0.10!		1	!					1			1				T	
2-Butanone	0.01		1	]	1	1			1	1 1			1 1			•	
1,1,1-Trichloroethane	[0.10]		1	ł	1	1			i			1	1 1		)	1	
Carbon tetrachloride	0.10		1	ı					1	]						1	
Bromodichloromethane	0.20		1	1					ì			l				$\overline{1}$	
1,2-Dichloropropane	1 1		1	1					1	Ī		!				ī	
cis-1,3-Dichloropropene	[0.20]		1	1	[				ī	1			1 1			$\overline{1}$	
Trichloroethene	[0.30]		!	1					1	1						ī	
Dibromochloromethane	0.10		!	i	!					1 1		!	1 1			$\overline{1}$	
1,1,2-Trichloroethane	0.10		i	1	1				1	1			1 1			ī	
	0.50		l	Ī	<u> </u>				Ì	1 1			1 1		!	1	
tran-1,3-Dichloropropene	0.10		1	Ī					i				1 1			1	
Bromoform	0.10		l	1					1	1 !			1 1			T	
4-Methyl-2-pentanone	0.01		!	1					1	1		<u></u>	1 1	-		<u> </u>	
2-Hexanone	0.01		1	1					1	1					<u> </u>	i	
Tetrachloroethene	10.201		1	!	!				1	1 1			1 1			1	
1,1,2,2-Tetrachloroethane	0.50		1	<del> </del>	i				1	1		<del></del>	<del></del>			1	
Toluene	0.40		1	1	i	1 1			1	1 1			1 1		<u> </u>	<del></del>	
Chlorobenzene	0.50		l	<del> </del> -	l .	1	i		1	+		L				+	
Ethylbenzene	0.10		<u> </u>	1				_	1	1 1			-			<del> </del>	
			<u> </u>	1	<u> </u>	<u> </u>	<u> </u>		<del>                                     </del>	++		<u> </u>	<del>!                                    </del>			-	
Styrene Xviene (total)	0.30		<u> </u>	<del> </del>	<u>!</u>	<u> </u>		<u> </u>	<del></del>	<del></del>		<u> </u>			<u> </u>	+-	
X Viene (total)	[0,30]		<del>                                     </del>	<del>                                     </del>	1	<u> </u>			<del></del>	+ +		!	╌┼			<del></del>	
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Toluene-d8	10.00		<del> </del>	<del> </del>	<u> </u>	<u> </u>	<u> </u>		<del></del>	1 1		l			<u>.                                    </u>	1	
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1,2-Dichloroethane-d4			<u> </u>	<u> </u>	<del>!</del>	<u></u>			<u> </u>	<del></del>		<u> </u>	<del></del>		L	<del></del>	
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	1				11029	1		L									
	i				1113/	)		<u> </u>					1				

Reviewer's Init/Date: 3/61/rdrd

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

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INSTRUMENT MSDIT	DATETIME		Initia, Cambrat on [115]97 (3:10			11/2/49 1005		16/44 1609			Continuing Calibration		
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1.1.2.2-Tetrachloroethane	03	30										}	
U.STrichloroethane		15											
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1.1-Dichloroethene		30											
i 2.3-Trichloropropane		30											
' 2-Dichloroethane		13											
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mois E	0.1	30										<u> </u>	T
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cis-1.2-Dichlaroprocene	<u> </u>	15											
Dibromochloromethane		1.5											
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ndomethane	<u> </u>	15	1312036	36,455	17/1								
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o-Xylene		15		<u> </u>	<u> </u>	<u> </u>	1		<u> </u>	<u> </u>	<u> </u>	<u> </u>	
Stvrene	1	15			1	ļ	ļ		<u> </u>			ļ	
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trans-1.2-Dichloroethene		15							1				
rans-1.3-Dichlorogrogene		10			-							<u> </u>	
Trichloroethane		15			<u> </u>		1		-	1			
Vinvl Chlonds		10				1							

Affected Samples

the SALE	Las Aula	
11221 11205	112-08	
11216 11203	11207	
11215 11222	11316	
11219 11212	11313	
11713		
(レイ)		
11224		

5/15

## Regional Transmittal Form

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	
DAIE:	•
SUBJECT:	Review of Data Received for Review on 1/12/2000
FROM:	Stephen L. Ostrodka, Chief (HSRL-5J) An How Mind By Superfund Technical Support Section of June 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind 1 By Mind
TO:	Data User:
1	
We have r	eviewed the data for the following case:
SITE NAME	: YIMCO DUMP CIN)
	ER: 9910471 SDG NUMBER:
Number an	d Type of Samples: Six Vost Curtvidge
	mbers: 113/6, 1/3/3, 1/3//, 1/3/5, 1/3/7 1/3/9
	y: Air toyic LTD Hrs. for Review: 4
	are our findings:
to data a	re useable and acceptable with the
ulperate.	ns decented in the attached ununtine
And	ind Lagrin
	$\mathscr Y$

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

Page 1 of 8

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN)

Case: SDG: 9910471

Below is a summary of the out-of-control audits and possible effects on the data for this Case/SDG:

Six VOST Cartridges, numbered 11316, 11313, 11311, 11315, 11317, and 11304, were collected on October 229, 1999 The lab received the samples on October 30, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

Reviewed by: T Sedlacek Lockheed Martin/ESAT Date: January 21, 2000

Page 2 of 8

Case:

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN) SDG: 9910471

#### 1. HOLDING TIME

Six VOST Cartridges, numbered 11316, 11313, 11311, 11315, 11317, and 11304, were collected on October 229, 1999 The lab received the samples on October 30, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

#### 2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

All GC/MS tuning complied with mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

#### 3. CALIBRATION

Initial and continuing calibrations of the Volatile, standards were evaluated for target compound list and outliers are recorded on the forms included as part of this narrative.

#### 4. BLANKS

The lab ran a matrix method blank for each day the VOST cartridges were analyzed. Cartridges used for daily methods blanks were not from the same batch or sampling media. Each of the blanks was labeled as "Lab Blank". All of the blanks had no TCLs or TICs present. Because the lab did not include any sort of identification for the blanks, it would be impossible to determine which samples are associated with which blank.

### 5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The volatile system monitoring compounds were within QC required limits for recovery and retention time; with the exception of:

The recovery of 1,2-Dichloroethane-d4 was out of control high in samples 11316 and 11313.

Therefore all positive results in samples 11316 and 11313

Reviewed by: T Sedlacek Lockheed Martin/ESAT Date: January 21, 2000

Page 3 of 8

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN)

SDG: 9910471

Case:

are qualified "J" estimated.

#### 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Due to the nature of the VOST cartridge matrix it is impossible to perform spiking on the samples. The method requires a batch certification of the VOST cartridges prior to use. The lab did not provide evidence that the pre-certification was performed. All results could be considered suspect due to possible reduced capacity or retention of the VOST media.

### 7. FIELD BLANK AND FIELD DUPLICATE

The samples did not provide a field blank with this SDG. Due the collection method a field duplicate can not be collected.

#### 8. INTERNAL STANDARDS

The internal standards retention times and area counts for the VOA fraction were all within the required QC limits: with the exception of 1,4-Dichlorobenzene in a lab blank, therefore for that lab blank all positive results are qualified "J" and nodetects are qualified "UJ".

#### 9. COMPOUND IDENTIFICATION

Target compounds (TCLs) and Tentatively Identified Compounds (TICs) were identified using a "best fit" library search method.

## 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All target compound quantitation was properly reported.

#### 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

#### 12. ADDITIONAL INFORMATION

Method modifications which could adversely affect data quality:

Reviewed by: T Sedlacek Lockheed Martin/ESAT Date: January 21, 2000

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN) SDG: 9910471

1. "Cartridges used for daily method blank may or may not be from the same batch or sampling media" as the analyzed samples.

Page 4 of 8

Case:

2. "Sampling media provided by the client is batch certified ahead of time, only if client provides blank cartridges"

The lab failed to provide copies of the manual data manipulations preformed in this data set. The reviewer is unable to determine what effect those actions have on the overall quality of the data.

## CALIBRATION OUTLIER FORM

IN CUMENTUNS/11/			Initial Ca	libration		Continu	iing Calibrat	ion	Continu	ing Calibrat	ıon	Continuing Calibration			
	DATE	TIME		94 1316			44 1014								
	RF	%D	RRF	%RSD	Q	RRF	%RSD	To	RRF	%RSD	Q	RRF	°,RSD	Q	
1.1.1-Trichloroethane		15													
1.1.2.2-Tetrachloroethane	0.3	30	<u> </u>			<u> </u>		<u> </u>			<u> </u>				
1.1.2-Trichloroethane	<u> </u>	1.5	<u></u>			<u> </u>	1	<u>.</u>	<u> </u>			<u> </u>			
1,1-Dichloroethane	0.1	15						<u> </u>							
1.1-Dichloroethene	<u> </u>	30	<u> </u>		<u> </u>		1				<u> </u>				
1.2.3-Trichloropropane	ļ	30										ļ	<u> </u>		
1,2-Dichloroethane		15												<u> </u>	
1.2-Dichloropropane		30							<u> </u>					<u> </u>	
Acetone	<u> </u>	30	000			0,057	32-7	1/05	<u></u>						
Acrylonitrile	<u> </u>	15													
Benzene		15	1,149	15.47	Jlux		<u> </u>			ļ					
Brc tichloromethane		15													
Bromotorm	0.1	30													
Bromomethane		30	2717	3305	Ju-										
Carbon Disclifide		15				<u> </u>				<u> </u>					
Carbon Tetrachloride		15													
Chlorobenzene	0.3	15										<u> </u>	<u> </u>		
C ethane	<u> </u>	15			<u> </u>								<u> </u>		
Cinciplorm		30				<u></u>		<u></u>							
Chloromethane	0.1	30							ļ				<u> </u>		
cis-1.3-Dichloropropene		15			<u> </u>			<u></u>	<u> </u>						
Dibromochloromethane		15												<u> </u>	
Dibromomethane	<u> </u>	15						<u></u>	<u> </u>				<u> </u>	<u> </u>	
Ethylbenzene		30						<u> </u>							
Frichlorofluoromethane		15													
lot thane		15	0.223	36.62	1/45										
m,p-Xylene		15						ļ			<u> </u>	ļ	<u> </u>		
Methylene Chlonde		15												$oldsymbol{oldsymbol{oldsymbol{eta}}}$	
o-Xvlene		15				ļ	ļ	<u> </u>			<u> </u>				
Styrene		15								<u> </u>	ļ				
Tetrachloroethene		15							L					1	
Toluene		30											1	1	
trans-1.2-Dichloroethene		15													
trans-1,3-Dichloropropene		10													
Trichloroethane		15						1						$\bot$	
Vinyl Chloride		30											<u> </u>		

## Affected Samples



11904 11207	
11904	
11207	
1316	
11373	

### CALIBRATION OUTLIERS VOLATILE TCL COMPOUNDS (Page 1 of 1)

Pg 6 of 3

SITE NAME: 14 in to Days

Date Time	Instrument# MSDH			l Cal.			tin. Cal		C	ontin. Ca	1	Co	ntin. Ca	<u>l.</u>	Contin. Cal.		
Chloromethane	Date/Time:	#			*				rf	1 %d	*	rf	1 %d	*	rf.	1 <b>%</b> d	*
Bommenthure	Chloromethane			l						1			1	Ī		1	+
Vinyl chloride   0.01				132.5	7 5/1		1	1		1	1		1	1 1		1	<del> </del>
Chlorechane				1	1	<u> </u>	1	1		1	1		1	1 1		1	†
Methylene chloride				i	i			1		ì		· · · · · · · · · · · · · · · · · · ·	Ī	1 1		İ	$\overline{1}$
Acetane				1	1		<u> </u>	1		1	1 1		Ī	1 1			1
Carbon disulfide				1				1		ī			1	i i		·	<del></del>
1,1-Dichloroethane			11.277	1	1	ウルナユ	32.7	17/10-		1	1 1		1	1 1			<del> </del>
1Dichloroethene (total)				1	1 1	12.15.2	1	1		1	1 1	-	l				1
1.2-Dichloroethane				1	1		i	i		i	Ī		]	1 1			1
Chloroform		1 1		!	$\overline{}$			<u> </u>		1			1	1 1			<del></del>
1.2-Dichloroethane	<del></del>	10.20		ł	1 1			1		1	1 1		İ	1 1		l	
2-Butanone   0.01				1	!!!			1 1		1	1 1			1 1			一
1.1.1-Trichloroethane				1	1 1		· · · · · · · · · · · · · · · · · · ·	1 1		1	1 1		1	1 1			
Carbon tetrachloride				<del> </del>	<del></del>		<u> </u>	<del>1  </del>		İ	<del>/</del>		<u> </u>	1 1		<del></del>	THE STATE OF
Bromodichloromethane   0.20				<u> </u>	<del></del>			<del></del>		1	1 1		<del> </del>	1 1		<u> </u>	<del></del>
1,2-Dichloropropene				1	<u> </u>				<del></del>	1	1 1		<u> </u>	1 1	<del></del>		+
Cis-1,3-Dichloropropene   0.20		1 1		<u> </u>	<del></del>		L	-		1	<del>                                     </del>		<del> </del>	1 1			╁
Trichlormethene   0.30		10.20		<del> </del>	1 1			<u> </u>		<del>                                     </del>	<del>                                     </del>		1	1 1			<del>                                     </del>
Dibromochloromethane	· · · · · · · · · · · · · · · · · · ·			<u> </u>	1 1		l	<del>                                     </del>		1	+ +		1	1 1			┼
1.1.2-Trichloroethane				<u> </u>	1 1		l	1 1		<del></del>	<del></del>		<u>                                       </u>	<del>                                     </del>		<u> </u>	<del> </del>
Benzene				<u> </u>	<del></del>		L	1 1		<del></del>	1 1		<del>1</del>	+			+
Image: Arrange   0.10				175 17	1 1700		L	<del>                                     </del>		1	1 1		<del> </del>	1 1			1
Bromoform   0.10				1/) ~ ~ ~ <del>*</del>	1 2			<del>                                     </del>		<del></del>	4		1	1 1			
4-Methyl-2-pentanone   0.01				<u> </u>	<del></del>		L	11		<del></del>	1 1		!	<del>1 1</del>			<u> </u>
2-Hexanone   0.01				<del> </del>	+		<del>                                     </del>	+		<del>. i</del>	1 1		1	1 1			<del></del>
Tetrachloroethene   0.20				<u> </u>	1		<u> </u>	1		<del></del>	++		<del>!</del>	1 1		l	+-
1.1.2.2-Tetrachloroethane				<u> </u>	1		<del> </del>	1		<del></del>	4		<del> </del>	1			+
Toluene   0.40				1	-		<u>!</u>			1	<del>-11</del>		<del></del>	<del>1 1</del>			<del>!                                    </del>
Chlorobenzene   0.50				<del> </del>			<u> </u>			<u> </u>	<del>-i</del>		<u> </u>	1			<del>                                     </del>
Ethvibenzene   0.10				<u> </u>	<del>                                     </del>			<del>                                     </del>		<del></del>	1		<u> </u>	1			╀
Styrene	·			<u> </u>	1	<u> </u>	ļ	1		<del></del>	4			1		<u> </u>	Ь.
Xvlene (total)   0.30				<del>                                     </del>	+	<u> </u>	<u> </u>	1		<u></u>	4		<u> </u>	1 1			
Toluene-d8 Bromofluorobenzene   0.20				<del> </del>	<del>                                     </del>	ļ	<u> </u>	+		<del></del>	4—4		<del> </del>	+			-
Bromofluorobenzene   0.20	Xviene (total)	10.30		<u> </u>	<del> </del>		<del>!</del> -	<del>!</del>		<del></del>			<del> </del>	++			<del> </del>
Bromofluorobenzene   0.20	<b>T</b> 1 10			<del></del>	<u> </u>	ļ	<u> </u>	1		<del></del> -	44		<del> </del>	1 1			<del> </del>
Samples affected:			•	<del></del>	<del></del>		<u> </u>	1			4		<del> </del>	+			<del></del>
Samples affected:				<del> </del>	<del>!</del> -		<u> </u>	<del></del>		<del></del>	4-4		<del> </del>	+			<del> </del>
Samples affected:	1,2-Dichloroethane-d4			L	<u> </u>	<u> </u>	L	<u> </u>	L				L	.1		l	┸
		]								*		<u> </u>					
	Samples affected:	ļ				<u> </u>			Ļ			<u> </u>					
Dr. 1/ 6 au		1				<u> </u>			<u> </u>								
D1. 1/ h au						<u> </u>			<u> </u>	·							
D1. 1/ 6 au					·	<del> </del>			<u> </u>	<del></del>		<u> </u>					
Dr. 1/ 6 au						<u> </u>			<u> </u>			<del> </del>			<u> </u>		
D1. 1/ 6 au			l						L			1			<u> </u>		
D1. 1/ 6 au		-	l			l			ļ			<u> </u>					
11. 11 h 411		,	l	<del>,                                      </del>		1			ــــــــــــــــــــــــــــــــــــــ						<u> </u>		
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J/R = All positive results are estimated "J" and non-detected results are unusable "R"

These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

#### **CALIBRATION OUTLIERS** VOLATILE TCL COMPOUNDS 1)

	VOLATILE ICE CO
(14) -10	(Page 1 of
CASESAS#: 91 5471	
COLUMN:	
HEATED PURGE (Y/N): /	_

LABORATORY: ATT TOY. CO.

Instrument# M 50N	<del>-</del>		l Cal.			tin. Cal		C	ontin. Ca	<u>l</u>	<u>C</u> c	ontin. Ca	l.	Co	ntin. Ca	<u>l.</u>
Date/Time:			149 13			19 De			<del> </del>		<u> </u>		<del></del>			
	#		∫ % rsd			%d_	. *	rf			rf	<u> 1</u> %d	*	ਜੀ	1 %d	L
Chloromethane			134,40	1//2	<u> </u>	1				<u> </u>		<u> </u>	1		<u> </u>	
Bromomethane	0.10	<del></del>	L		L	1				1	<u> </u>			L	<u></u>	1_
Vinyl chloride_	0.10		L			<u> </u>						<u> </u>	لــــــــــــــــــــــــــــــــــــــ	<u> </u>	<u> </u>	1_
Chloroethane	0.01		<u> </u>		l					1	L	1		<u></u>	<u></u>	1
Methylene chloride			127,03			<u> </u>						<u>i</u>			<u> </u>	1_
Acetone		1004	L	<u> </u>	0,010	128.1	1/15	<u> </u>	1	1		<u> </u>	1 1		<u>L</u>	$\perp$
Carbon disulfide	0.01	L	<u></u>			<u> </u>	1		1	1			لــــــــــــــــــــــــــــــــــــــ		1	
1.1-Dichloroethene	0.10	<u>.                                    </u>	<u></u>							!	<u> </u>					
1,1-Dichloroethane	10.20	<u>!</u>	<u> </u>	1		<u> </u>	لــــــــــــــــــــــــــــــــــــــ		1	<u></u>		<u> </u>	$\perp \perp$		<u> </u>	
1,2-Dichloroethene (total)		<u> </u>	<u> </u>	1						<u>1</u>		1	11			
Chloroform	0.20	!				<u> </u>			1			<u> </u>	1_1		<u>L</u>	
1,2-Dichloroethane	0.10	<u>!</u>	<u></u>	1		L			1	1	[	1			<u> </u>	1
2-Butanone	0.01	1	<u></u>	Ī .		Ī			1			1				L
1,1,1-Trichloroethane	0.10	1					1 1		1		<u> </u>		1			
Carbon tetrachloride	0.10	1	<u> </u>									1		·		匸
Bromodichloromethane	0.20	1	1	Ī								1			I	L
1,2-Dichloropropane			1	I						1		<u> </u>			1	1
cis-1,3-Dichloropropene	[0.20	1	1	1		1				1	l	<u> </u>			1	
Trichloroethene	0.30	1		Ī		1						1			1	
Dibromochloromethane	0.10		!	ī		1	ī			1	!	1	1 1		1	1
1,1,2-Trichloroethane	0.10	!		1		1	1		İ	1	!	1		-		1
		<del></del>	1	Ì			i		1	Ī					1	1
tran-1,3-Dichloropropene	0.10	!	Ì	Ī		1	1		1	1		1	1 1		!	1
Bromoform	0.10		i	1		1	1		1	1	1	1	1 1		1	Ī
4-Methyl-2-pentanone			13253	1/4			1		1	1	1	1			İ	Ī
2-Hexanone					02025	344	13/1			1		Ī	1 1	-	Ī	1
Tetrachloroethene	10.20					1	!		1	1	1	İ	1 1		1	1
1,1,2,2-Tetrachloroethane	0.50		1	i i	[	<u> </u>			ī	į		ì	1 1		1	ī
Toluene	10.40		<del> </del>	!	!		!		1	i	l	<del>                                     </del>	1 1		]	1
Chlorobenzene	10.50		ì	<u> </u>	1	<del></del>	1		1	ī	1	1	1		İ	T
Ethylbenzene	10.10	<del></del>	<del> </del>	<del> </del>	<u> </u>	<del>1</del>	1	<u> </u>	1	<del> </del>	1	1	!!!		1	<del>                                     </del>
Styrene			164	171.	!	<u></u>	1	!	<del>                                     </del>	1	<u> </u>	1			<u> </u>	1
Xylene (total)	0.30		1.25.37	<u> </u>	<u> </u>	<del>                                     </del>	1		1	<del> </del>	<u> </u>	<del>†</del>	1		1	i
A viene (total)	1	<u> </u>	<u> </u>	+	<u>!</u> I	<del>1</del>	<del></del>	l	1	1	1	1	1 1		1	1
Toluene-d8	1	!	!	<del> </del>	<u>                                     </u>	<u> </u>	<u> </u>	<u></u> I	1	<del>i</del>	<del>                                     </del>	<del>                                     </del>	+		<del>'</del>	1
Bromofluorobenzene	0.20	1	<del>                                     </del>	+	1	1	1	l	<del></del>	1	1	1	1 1		<del></del>	<del> </del>
1,2-Dichloroethane-d4	10.20	1	<u>1</u>	<del></del>	! !	l	<del></del>	! !	<u> </u>	1	1	1	<del></del>		1	+
1,2-Diemoroemane-d4	<u> </u>	<u> </u>	1	ــــــــــــــــــــــــــــــــــــــ	1 445	But	1				<u>.                                    </u>	<u>.                                    </u>			<del></del>	-
Samples affected:		ļ ———			1113/1	100		1			<del></del>	~			······	
Gampies affected.	:	}			111311			1			<u>.                                    </u>			<u> </u>		
		!						1			<u>!</u>					
		·			11317			<u> </u>			<del>                                     </del>			L		
		ļ			11364			<u> </u>			1 1			<u> </u>		
		ļ						<del> </del>			<u> </u>	<del></del>		<u> </u>		
		ļ			<u> </u>		<del></del>	1			<del> </del>			<u></u>		_
		ļ						<del>                                     </del>			1			<u> </u>		
		l			1									L		

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

Reviewer's Init/Date: 715 1/21/24~

These flags should be applied to the analytes on the sample data sheets.

<sup># =</sup> Minimum Relative Response Factor

### CALIBRATION OUTLIER FORM

INSTRUMENT #50N			Initial Ca	ilibration		Continu	iing Calibrat	100	Continu	ing Calibrat	ion	Continuing Calibration		
	DATE	TIME	10/3/	91 13/0		11/1/	144					}		
	RF	%D	RRF	%RSD	Q	RRF	%RSD	Q	RRF	%RSD	Q	RRF	%RSD	Ç
1.1.1-Trichloroethane		15					<u> </u>							
1.1.2.2-Tetrachloroethane	0.3	30									<u> </u>			
1.1.2-Trichloroethane	<u> </u>	15	<u> </u>	<u> </u>	ļ									$oxed{L}$
1,1-Dichloroethane	0.1	15							<u> </u>					
I.I-Dichloroethene	<u> </u>	30			ļ		ļ							
1.2.3-Trichloropropane	ļ	30	<u> </u>											
1.2-Dichloroethane		15				<u> </u>	<u> </u>		<u> </u>					
1.2-Dichloropropane		30			<u> </u>			<u> </u>	<u> </u>					$\mathbb{L}$
Acetone		30	C.014		<u> </u>	ade	28.1	J/vs						
Acrylonitrile		15	<u> </u>			<u> </u>	<u></u>							$\perp$
Benzene	<u> </u>	15	1,199	15,476	1/15		<u> </u>	<u> </u>						
Bromodichloromethane		15					<u> </u>	<u> </u>			L			
Bromoform	0.1	30			<u> </u>			<u> </u>					· verifi-	1
Bromomethane		30				<u> </u>		<u> </u>	<u> </u>			<u> </u>		
Carbon Disulfide		1.5						<u> </u>	<u> </u>					
Carbon Tetrachloride		15					<u> </u>	<u> </u>	<u> </u>					
Chlorobenzene	0.3	15					<u> </u>	<u> </u>	<u> </u>	<u> </u>		ļ		
Chloroethane	<u> </u>	15												'
Chloroform		30			<u> </u>	<u></u>		<u> </u>						+
Chloromethane	01	30	0.367	34.621	This									L
cis-1,3-Dichloropropene		15						ļ						
Dibromochloromethane	<u> </u>	15			ļ									$\perp$
Dibromomethane		15												
Ethylbenzene		30									<u></u>			$oldsymbol{oldsymbol{oldsymbol{oldsymbol{eta}}}$
Trichlorotluoromethane	ļ	15	<u> </u>											L
lodomethane		15	0,254	18,228	1/15			<u> </u>						`_
m.p-Xylene	<u> </u>	15	<u> </u>						ļ					1
Methylene Chloride		15	01303	77,026	1/65		<u> </u>							L
o-Xvlene	<u> </u>	15	<u> </u>	]	]			<u> </u>	1					L
Styrene		15	0,477	16.44	Tlus			<u> </u>						ot
Tetrachloroethene		15						1						$\perp$
Toluene		30												$\perp$
trans-1.2-Dichloroethene		15												$\perp$
trans-1.3-Dichloropropene		10												$\perp$
Trichloroethane		15												$\perp$
Vinyl Chloride		30												$\perp$

## Affected Samples

Luh BUIL	
11371	
113/5	and
11317	
11317	

Lockheed Martin Services Group Environmental Services & Technologies Region 5 536 South Clark Street #1050 Chicago, IL 60605 Telephone 312-353-8302 Facsimile 312-353-8307



Date: March 9, 2000

To: Richard Byvik, EPA WAM

From: W. Ira Wilson, ESAT Chemist

Thru: Ziyad Rajabi, ESAT Team Manager

Copies: W. Ira Wilson, ESAT Organic Group Leader

Jay Thakkar, ESAT Contract RPO

Ref:

TDF# 5207-982 WA# 05-00-4-07

Contract # 68D60002

SUBJECT: Organic Data Review of PRP Case; SDG # 9910332. Volatile Analyses of

VOST Cartridges, using SW846 Method 041/8260B.

Attached is the deliverable for PRP data case; SDG # 9910332. Volatile Analysis of 8 VOST Cartridges, using SW846 Method 041/8260B. Included in the deliverable is the Manual case narrative. If you have any question please feel free to contact Ira Wilson.

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	March 9, 2000
SUBJECT:	Review of Data Received for Review on February 28, 2000
FROM:	Stephen L. Ostrodka, Chief (SRT-4J) Superfund Technical Support Section  - Lor Jthu Ostroeller  Mahrin Japul  3/13/00
TO:	Data User: PRP
	iewed the data for the following case:
CASE NUMI	BER: <u>N/A</u> SDG NUMBER: <u>9910332</u>
Number and	Type of Samples: Eight (8) VOST Cartgidges
Sample Num	bers: <u>11011, 11024, 11016, 11109, 11023, 11017, 11013 and 11110</u> .
Laboratory:	Compuchem Hrs. for Review: 15
Following ar	e our findings:
ttic	laturas insentit and acceptant with the
andijo	e our findings: Lations usualle and acceptable with the cations alexineed in the attacked marratine
· •	Mi Aund of Bypinh

CC: Cecilia L. Moore Region 5 TPO Mail Code: SM-5J

Page 4 of 5

Laboratory: Air Toxics Ltd Case:

Site: Himco Dump (IN) SDG: 9910332

Below is a summary of the out-of-control audits and possible effects on the data for this Case/SDG:

Eight VOST Cartridges, numbered 11011, 11024, 11016, 11109, 11023, 11017, 11013, and 11110, were collected on October 22, 1999. The lab received the samples on October 23, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

Reviewed by: W. Ira Wilson Lockheed Martin/ESAT Date: March 9, 2000

Page 4 of 5

Case:

Laboratory: Air Toxics Ltd

Site: Himco Dump (IN) SDG: 9910332

#### 1. HOLDING TIME

Eight VOST Cartridges, numbered 11011, 11024, 11016, 11109, 11023, 11017, 11013, and 11110, were collected on October 22, 1999. The lab received the samples on October 23, 1999 in good condition. All samples were analyzed for volatile organic analytes. All were analyzed according to modified SW846 8260.

The VOST analyses were performed within the technical holding times of 14 days after sample collection; therefore the results are acceptable.

#### 2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

All GC/MS tuning complied with mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

#### 3. CALIBRATION

Initial and continuing calibrations of the Volatile, standards were evaluated for target compound list and outliers are recorded on the forms included as part of this narrative.

#### 4. BLANKS

The lab ran a Method Blank for the VOST cartridges analyzed. The Blank was labeled as "Lab Blank". The blank did not report any detectable TCLs or TICs. Therefore, the Method Blank results are acceptable.

#### 5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The volatile system monitoring compounds were within QC required limits for recovery and retention time. Therefore, the results are acceptable.

#### 6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Due to the nature of the VOST cartridge matrix it is impossible to perform spiking on the samples. The method requires a batch certification of the VOST cartridges prior to

Reviewed by: W. Ira Wilson Lockheed Martin/ESAT

Date: March 9, 2000

Page 4 of 5

Laboratory: Air Toxics Ltd Case:

Site: Himco Dump (IN) SDG: 9910332

use. The lab did not provide evidence that the pre-certification was performed. However, the lab performed an analysis on a LCS sample and all spiked analytes were within the QC limits.

#### 7. FIELD BLANK AND FIELD DUPLICATE

The samples did not provide a field blank with this SDG. Due the collection method a field duplicate can not be collected

#### 8. INTERNAL STANDARDS

The internal standards retention times and area counts for the VOA fraction were all within the required QC limits. Therefore, the results are acceptable.

#### 9. COMPOUND IDENTIFICATION

Target compounds (TCLs) and Tentatively Identified Compounds (TICs) were identified using a "best fit" library search method.

## 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All target compound quantitation for total ng were properly reported.

#### 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

#### 12. ADDITIONAL INFORMATION

The lab failed to provide copies of the manual data manipulations preformed in this data set. The reviewer is unable to determine what effect those actions have on the overall quality of the data.

Reviewed by: W. Ira Wilson Lockheed Martin/ESAT Date: March 9, 2000

#### CALIBRATION OUTLIERS VOLATILE TCL COMPOUNDS

(Page 1 of 1)

LABORATORY: AIR TOXICS LISTE NAME: HIMCO DUM.

nstrument# MSd 4, 2	1		l Cal.			ntin. Cal.			ontin. Ca	1	Co	ntin. Ca	1. ]	Co	ntin. C	al.
Date/Time:			194-9	23		9 8:0			<del></del>							
	#	ਜ '	%rsd		<u>  'rf'                                  </u>	%d		rf	<u>  %d</u>	*	<u>rf</u>	%d	*	<u>ਜ</u>	<u>%d</u>	,
Chloromethane	0.01					1	L						$\bot$		<u> </u>	
Bromomethane		10,129		1	10/153	58.7	$\Box$	<u> </u>				<u> </u>			<u> </u>	$\perp$
Vinvl chloride	10.10		<u> </u>	J		<u> </u>	<u></u>	L				L	1		<u> </u>	
Chloroethane		0.083		<u>!</u>	10.119	143.3	J	<u> </u>					$\perp \perp$		<u> </u>	
Methylene chloride	0.01	<u> </u>			1	<u>L</u>		<u> </u>				<u> </u>	$\perp \perp$			1
Acetone	0.01			<u></u>	1	<u> </u>		<u> </u>							L	
Carbon disulfide	0.01			1	<u> </u>			<u></u>	<u> </u>							
1,1-Dichloroethene	0.10	1			<u>L</u>	<u>L</u>		L					<u> </u>			
1,1-Dichloroethane	0.20						1	<u></u>					1 1			
1,2-Dichloroethene (total)	11	7.35	30/3	IT	1				1				<u> </u>			
Chloroform	10.20				<u></u>											
1,2-Dichloroethane	0.10			}						1 1						1
2-Butanone	0.01			1	1.	1				1.1						1
1,1,1-Trichloroethane	10.10				1											_
Carbon tetrachloride	0.10															
Bromodichloromethane	0.20			Ī												ī
1,2-Dichloropropane				1						1						ī
is-1,3-Dichloropropene	10.20	!		Ī	1											1
Trichloroethene	10.30				1					1 1	1		1.			T
Dibromochloromethane	0.10	!		1	1								L. 1			Ī
1,1,2-Trichloroethane	0.10	!		1	1	]					]					
Benzene	0.50	289	33.45	1.7					1	1 ]						_
ran-1.3-Dichloropropene	0.10				]		] ]			1 1						1
Bromoform	0.10	!		Ī	Ī				1	1 1			!!			
4-Methyl-2-pentanone	10.01			1	!					1	1					Ī
2-Hexanone	10.01			1					1	1 1						1
Tetrachloroethene	10.20	<del></del>		1	!	!	!		i	1 1			1 1			1
1,1,2.2-Tetrachloroethane	10.50			1	1	1			1	1 !	f					1
Toluene	10.40			<del> </del>	İ	!			1	1 1	1					i
Chlorobenzene	10.50				1 .	1			<del>                                     </del>	<del></del>	1		1			1
Ethylbenzene	0.10			1	1	1			<del>i</del>	1 1	<u>-</u> -		1 1			
Styrene	10.30			1	1	<u> </u>			1	1 !	<del>-</del>					- ,
Xvlene (total)	10.30			<del>                                     </del>	<u> </u>	<u> </u>			<del> </del>	1 1			1 1			<del>-</del>
(**************************************	1 1			<u></u>	1	<del></del>	i I		1	1 1	1		1			1
Toluene-d8	1 !	<u> </u>		<del>                                     </del>	<u>.                                    </u>	1			<del></del>	1 1	·		1 1			十
Bromofluorobenzene	10.20	l I		1	<del></del>				1	1 1			1 1			<del></del>
1,2-Dichloroethane-d4	1 1	<u>:</u>		1	<del></del>	1			<del>1</del>	1 1		·	-		<del></del>	+
1,2-Dichiorocalane-04	<u> </u>			<del></del>	1/1011	ach			_!	<del></del>			<del></del>			
Samples affected:	1					4 a c					·					
Samples arrected.						a a E	-	<u> </u>								
•	) 1					9 9 8	<del>}</del> _	<u> </u>								
	j -						P	L								
	i					3 a &	<b>P</b> —									
	ļ		<del></del>			7 a 6	n i	<u> </u>								
						3 a f	<del> </del>	<u> </u>	···							
	,				11101		<u> </u>	<u> </u>								
Reviewer's Init/Date: 3-3					Val	2 BIA	$\nu \kappa$	1								

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

= These flags should be applied to the analytes on the sample data sheets.

= Minimum Relative Response Factor

## ORGANIC DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature used in this document, the following code letters and associated definitions are provided:

VALUE - when/if the result of a value is greater than or equal to the Contract Required Quantitation Limit (CRQL).

- U Indicates that the compound was analyzed for, but not detected. The sample quantitation limit corrected for dilution and percent moisture is reported.
- Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound where the result is less than the sample quantitation limit, but greater than zero. The flag is also used to indicate a reported result having an associated QC problem.
- R Indicates the data are unusable. (NOTE: The analyte may or may not be present.)
- N Indicates presumptive evidence of a compound. This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search.
- P Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns. The lower of the two results is reported.
- C Indicates pesticide results that have been confirmed by GC/MS.
- B Indicates the analyte is detected in the associated blank as well as in the sample.
- E Indicates compounds whose concentrations exceed the calibration range of the instrument.
- D Indicates an identified compound in an analysis has been diluted. This flag alerts the data user to any differences between the concentrations reported in the two analysis.
- A Indicates tentatively identified compounds that are suspected to be aldol condensation products.
- G Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method.
- L Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method.
- T Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample.

X,Y,Z are reserved for laboratory defined flags.

## SAMPLE NAME: 11009A

### ID#: 9910301-03A

### Modified VOST 5041A GC/MS Full Scan

File Name:	h110206	Date of Collection: 10/20/99
Dil. Factor:	1.00	Date of Analysis: 11/2/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	Not Detected
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	23
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Katone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	12
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

	•		
Compound	CAS Numbe	r Match Quality	Amount (nG)_

None Identified

**SAMPLE NAME: 11009A** 

ID#: 9910301-03A

## Modified VOST 5041A GC/MS Full Scan

File Name:	h110206	· .	Date of Collection: 10/20/99
Dil. Factor:	1.00		Date of Analysis: 11/2/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported CAS Number Match Quality Amount (nG) Compound

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	93	72-135
1,2-Dichloroethane-d4	80	69-137
Toluene-d8	97	77-124
4-Bromofluorobenzene	103	70-133

## SAMPLE NAME: 11021A/11009B

### ID#: 9910301-07A/03B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h102915		Date of Collection: 10/20/99
Dil. Factor:	1.00	Į.	Date of Analysis: 10/29/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	80
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	15
Acetone	50	69
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	12
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	1600 E
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

## TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	49
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	90 %	55

**SAMPLE NAME: 11021A/11009B** 

ID#: 9910301-07A/03B

## Modified VOST 5041A GC/MS Full Scan

File Name:	h102915	Date of Collection: 10/20/99
Dil. Factor:	1.00	Date of Analysis: 10/29/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported				
Compound	CAS Number	Match Quality	Amount (nG)	
Pentanal	110-62-3	80 %	34	
Hexanal	66-25-1	87 %	47	
Heptanal	111-71-7	38 %	45	
Octanal	124-13-0	90 %	140	
Nonanal	124-19-6	83 %	160	

E = Exceeds instrument calibration range.

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	98	72-135
1,2-Dichloroethane-d4	94	69-137
Toluene-d8	94	77-124
4-Bromofluorobenzene	105	70-133

SAMPLE NAME: 11014 a&b

ID#: 9910316-02A/B

## Modified VOST 5041A GC/MS Full Scan

File Name: h110212	Date of Collection: 10/21/99
Dil. Factor:	Date of Analysis: 11/2/99

Compound	Det. Limit (nG)	Det. Limit (uG/m3)	Amount (nG)	Amount (uG/m3)
Chloromethane	10	21	Not Detected	Not Detected
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11	10	57	19	110
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	16	52
Acetone	50	120	Not Detected	Not Detected
Methylene Chloride	10	35	Not Detected	Not Detected
trans-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1,1-Dichloroethane	10	41	Not Detected	Not Detected
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	Not Detected	Not Detected
Chloroform	10	50	Not Detected	Not Detected
1,1,1-Trichloroethane	10	55	Not Detected	Not Detected
Carbon Tetrachloride	10	64	Not Detected	Not Detected
Benzene	10	32	Not Detected	Not Detected
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	Not Detected	Not Detected
1,2-Dichloropropane	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	Not Detected	Not Detected
cis-1,3-Dichloropropene	. 10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachloroethene	10	69	Not Detected	Not Detected
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	Not Detected	Not Detected
m,p-Xylene	10	44	Not Detected	Not Detected
o-Xylene	10	44	Not Detected	Not Detected
Styrene	10	43	Not Detected	Not Detected
Bromoform	10	100	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	10	70	Not Detected	Not Detected
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	Not Detected	Not Detected
1,2-Dichlorobenzene	10	61	Not Detected	Not Detected
cis-1,2-Dichloroethene	10	40	Not Detected	Not Detected

SAMPLE NAME: 11014 a&b

ID#: 9910316-02A/B

## Modified VOST 5041A GC/MS Full Scan

File Name: h110212 Dil. Factor: 1.00	Date of Collection: 10/21/99 > Date of Analysis: 11/2/99
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## TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	27
.alphaPinene	80-56-8	95 %	440
Camphene	79-92-5	83 %	760
.betaPinene	127-91-3	91 %	240
Octanal	124-13-0	90 %	<b>3</b> 3
Limonene	138-86-3	91 %	25
Nonanal	124-19-6	83 %	36
	124-19-6	83 %	

	Method
% Recovery	Limits
91	72-135
81	69-137
101	77-124
98 .	70-133
	91 81 101

SAMPLE NAME: 11003A/B

ID#: 9910301-05A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h102917	Date of Collection: 10/20/99
Dil. Factor:	1.00	Date of Analysis: 10/29/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	250000 S
Bromomethane	10	110
Chloroethane	10	6500 E
Freon 11	10	4600 E
1,1-Dichloroethene	10	23000 E
Carbon Disulfide	10	230000 E
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	18000 E
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	1400 E
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	4700 E
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	81000 S
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	34000 E
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	74000 S
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	17000 È
m,p-Xylene	10	11000 E
o-Xylene	10	3300 E
Styrene	10	1100 E
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	610
1,2-Dichlorobenzene	10	42
cis-1,2-Dichloroethene	10	51000 E

## TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	90 %	31000000 S
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	72 %	30000000 S

SAMPLE NAME: 11003A/B

ID#: 9910301-05A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h102917	Date of Collection: 10/20/99
Dil. Factor:	1.00	Date of Analysis: 10/29/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
1-Propene, 2-methyl-	115-11-7	78 %	35000000 S
Methanethiol	74-93-1	86 %	33000000 S
Pentane	109-66-0	38 %	13000
Pentane, 3-methyl-	96-14-0	86 %	8800
Hexane	110-54-3	91 %	21000
Cyclopentane, methyl-	96-37-7	86 %	15000
Cyclohexane	110-82-7	83 %	11000
Heptane	142-82-5	90 %	13000

E = Exceeds instrument calibration range.

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	600 Q	72-135
1,2-Dichloroethane-d4	860 Q	69-137
Toluene-d8	639 Q	77-124
4-Bromofluorobenzene	28 Q	70-133

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

S = Saturated peak; data reported as estimated.

## SAMPLE NAME: 11005A/B

## ID#: 9910301-06A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h110304	Date of Collection: 10/20/99
Dil. Factor:	478	Date of Analysis: 11/3/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	4800	Not Detected
Vinyl Chloride	4800	180000
Bromomethane	4800	Not Detected
Chloroethane	4800	Not Detected
Freon 11	4800	Not Detected
1,1-Dichloroethene	4800	Not Detected
Carbon Disulfide	4800	110000
Acetone	24000	Not Detected
Methylene Chloride	4800	Not Detected
trans-1,2-Dichloroethene	4800	Not Detected
1,1-Dichloroethane	4800	Not Detected
Vinyl Acetate	24000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	24000	Not Detected
Chloroform	4800	Not Detected
1,1,1-Trichloroethane	4800	Not Detected
Carbon Tetrachloride	4800	Not Detected
Benzene	4800	Not Detected
1,2-Dichloroethane	4800	Not Detected
Trichloroethene	4800	160000
1,2-Dichloropropane	4800	Not Detected
Bromodichloromethane	4800	Not Detected
trans-1,3-Dichloropropene	4800	Not Detected
4-Methyl-2-pentanone	24000	Not Detected
Toluene	4800	76000
cis-1,3-Dichloropropene	4800	Not Detected
1,1,2-Trichloroethane	4800	Not Detected
Tetrachloroethene	4800	390000
2-Héxanone	24000	Not Detected
Dibromochloromethane	4800	Not Detected
Chlorobenzene	4800	Not Detected
Ethyl Benzene	4800	71000
m,p-Xylene	4800	50000
o-Xylene	4800	11000
Styrene	4800	Not Detected
Bromoform	4800	Not Detected
1,1,2,2-Tetrachloroethane	4800	Not Detected
1.3-Dichlorobenzene	4800	Not Detected
1,4-Dichlorobenzene	4800	Not Detected
1,2-Dichlorobenzene	4800	Not Detected
cis-1,2-Dichloroethene	4800	25000

## TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	91 %	180000
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	90 %	380000

## SAMPLE NAME: 11005A/B

### ID#: 9910301-06A/B

## Modified VOST 5041A GC/MS Full Scan

File Name:	h110304	3. A. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	Date of Collection: 10/20/99
Dil. Factor:	478		Date of Analysis: 11/3/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported				
Compound	CAS Number	Match Quality	Amount (nG)	
1-Propene, 2-methyl-	115-11-7	64 %	180000	
Hexane	110-54-3	83 %	98000	
Cyclopentane, methyl-	96-37-7	86 %	81000	
Heptane	142-82-5	72 %	92000	
Cyclohexane, methyl-	108-87-2	80 %	83000	
Octane	111-65-9	91 %	59000	
.alphaPinene	80-56-8	95 %	180000	
Hexane, 2,2,5-trimethyl-	3522-94-9	59 %	68000	

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	93	72-135
1,2-Dichloroethane-d4	85	69-137
Toluene-d8	106	77-124
4-Bromofluorobenzene	114	70-133
Benzene-d6	132	50-150

SAMPLE NAME: 11108A/B ID#: 9910301-04A/B

## Modified VOST 5041A GC/MS Full Scan

File Name:	h102916	Date of Collection: 10/20/99
Dil. Factor:	1.00	Date of Analysis: 10/29/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	24
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	100
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	<b>°</b> 10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	58
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10 -	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

## TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality_	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	35
Butanal	123-72-8	43 %	44

SAMPLE NAME: 11108A/B

ID#: 9910301-04A/B

## Modified VOST 5041A GC/MS Full Scan

File Name:	h102916	Date of Collection: 10/20/99
Dil. Factor:	1.00	Date of Analysis: 10/29/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported				
Compound	CAS Number	Match Quality	Amount (nG)	
Pentanal	110-62-3	56 %	64	
Hexanal	66-25-1	90 %	89	
Heptanal	111-71-7	50 %	81	
Octanal	124-13-0	97 %	250	
Nonanal	124-19-6	78 %	230	
Decanal	112-31-2	80 %	36	
Tetradecanal	124-25-4	91 %	31	

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	107	72-135 .
1,2-Dichloroethane-d4	102	69-137
Toluene-d8	93	77-124
4-Bromofluorobenzene	104	70-133

SAMPLE NAME: 11019A/B

#### ID#: 9910301-02A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h102914	 Date of Collection: 10/20/99
Dil. Factor:	1.00	Date of Analysis: 10/29/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	65
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	14
Acetone	50	62
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

## TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	33
Octanal	124-13-0	78 %	34

SAMPLE NAME: 11019A/B

ID#: 9910301-02A/B

## Modified VOST 5041A GC/MS Full Scan

File Name:	* •	f f	102914		Date of Collection: 10/20/99
Dil. Factor:		<u></u>	1.00	) - · · · ·	Date of Analysis: 10/29/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported CAS Number Match Quality Amount (nG) Compound

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	104	72-135
1,2-Dichloroethane-d4	100	69-137
Toluene-d8	97	77-124
4-Bromofluorobenzene	103	70-133

SAMPLE NAME: 11105 a&b

### ID#: 9910316-03A/B

## Modified VOST 5041A GC/MS Full Scan

- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	1/99
Dil. Factor: 100   Date of Analysis: 11/2	9

Campapd	Det. Limit	Det. Limit	Amount	Amount
Compound	(nG)	(uG/m3)	(nG)	(uG/m3)
Chloromethane	10	21	Not Detected	Not Detected
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11	10	57	16	90
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	100	320
Acetone	50	120	93	220
Methylene Chloride	10	35	Not Detected	Not Detected
trans-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1,1-Dichloroethane	10	41	Not Detected	Not Detected
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	60	180
Chloroform	10	50	Not Detected	Not Detected
1,1,1-Trichloroethane	10	55	Not Detected	Not Detected
Carbon Tetrachloride	10	64	Not Detected	Not Detected
Benzene	10	32	13	44
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	Not Detected	Not Detected
1,2-Dichloropropane	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	18	68
cis-1,3-Dićhloropropene	10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachloroethene	10	69	Not Detected	Not Detected
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	11	48
m,p-Xylene	10	44	Not Detected	Not Detected
· · · ·	10	44	Not Detected	Not Detected
o-Xylene		43	12	52
Styrene	10	100	Not Detected	Not Detected
Bromoform			Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	10	70		
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	Not Detected	Not Detected
1,2-Dichlorobenzene cis-1,2-Dichloroethene	10 10	61 40	Not Detected Not Detected	Not Detected Not Detected

36

## AIR TOXICS LTD.

SAMPLE NAME: 11105 a&b

ID#: 9910316-03A/B

### Modified VOST 5041A GC/MS Full Scan

File Nam é:	h110213	Date of Collection: 10/21/99
		이 얼마나 그렇지? 성으로 사고하다 소급을 경기를 받았다.
Dil. Factor:	1:00	Date of Analysis: 11/2/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported Amount Compound **CAS Number** Match Quality (nG) Methane, dichlorodifluoro-75-71-8 83 % 26 91% 123-72-8 31 Butanal 110-62-3 43 % 46 Pentanal Hexanal 66-25-1 90 % 48 27 40 % 111-71-7 Heptanal 80-56-8 95 % 67 .alpha.-Pinene 79-92-5 86 % 160 Camphene 91% .beta.-Pinene 127-91-3 45 124-13-0 86 % 61 Octanal

Container Type: VOST Tube

Nonanal

		Method
Surrogates	% Recovery	Limits
Dibromofluoromethane	82	72-135
1,2-Dichloroethane-d4	75	69-137
Toluene-d8	100	77-124
4-Bromofluorobenzene	105	70-133

124-19-6

83 %

SAMPLE NAME: 11022A/B

### ID#: 9910301-08A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h110208	Date of Collection: 10/20/99
Dil. Factor:	1.00	Date of Analysis: 11/2/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	17
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	21
Acetone	50	94
Methylene Chloride	10	13
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	54
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	11
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

## TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	90 %	28
Hexanal	66-25-1	90 %	41

**SAMPLE NAME: 11022A/B** 

ID#: 9910301-08A/B

## Modified VOST 5041A GC/MS Full Scan

File Name:	h110208	Date of Collection: 10/20/99
Dil. Factor:	1.00	Date of Analysis: 11/2/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
Heptanal	111-71-7	53 %	31
Octanal	124-13-0	90 %	110
Nonanal	124-19-6	83 %	120

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	91	72-135
1,2-Dichloroethane-d4	84	69-137
Toluene-d8	100	77-124
4-Bromofluorobenzene	107	70-133

## SAMPLE NAME: 11021B

## ID#: 9910301-07B

## Modified VOST 5041A GC/MS Full Scan

File Name:	h110207		Date of Collection: 10/20/99
Dil. Factor:	1.00	ż	Date of Analysis: 11/2/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	24
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	34
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

## TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	91 %	350
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	90 %	1200

**SAMPLE NAME: 11021B** 

ID#: 9910301-07B

## Modified VOST 5041A GC/MS Full Scan

File Name:	h110207	Date of Collection: 10/20/99			
Dil. Factor:	1.00	Date of Analysis: 11/2/99			
TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported					

**CAS Number** Compound

**Match Quality** Amount (nG)

Surrogates	% Recovery	Method Limits	
Dibromofluoromethane	92	72-135	
1,2-Dichloroethane-d4	85	69-137	
Toluene-d8	99	77-124	
4-Bromofluorobenzene	106	70-133	

## SAMPLE NAME: 11107 a&b

## ID#: 9910316-05A/B

### Modified VOST 5041A GC/MS Full Scan

File Name: Dil. Factor:	h110215 1.00			Date of Collection: 10/21/99 Date of Analysis: 11/2/99	
Compound	Det. Limit (nG)	Det. Limit (uG/m3)	Amount (nG)	Amount (uG/m3)	
Chloromethane	10	21	Not Detected	Not Detected	
Vinyl Chloride	10	26	Not Detected	Not Detected	
Bromomethane	10	39	Not Detected	Not Detected	
Chloroethane	10	27	Not Detected	Not Detected	
Freon 11	10	57	1900 E	11000 E	
I.1-Dichloroethene	10	40	Not Detected	Not Detected	
Carbon Disulfide	10	32	25	79	
Acetone	50	120	150	350	
Methylene Chloride	10	35	100	350	
rans-1,2-Dichloroethene	10	40	150	620	
I,1-Dichloroethane	10	41	120	490	
Vinyl Acetate	50	180	Not Detected	Not Detected	
2-Butanone (Methyl Ethyl Ketone)	50	150	130	380	
Chloroform	10	50	65	320	
1,1,1-Trichloroethane	10	55	260	1400	
Carbon Tetrachloride	10	64	Not Detected	Not Detecte	
Benzene	10	32	39	130	
1,2-Dichloroethane	10	41	Not Detected	Not Detecte	
Trichloroethene	10	55	840	4600	
1,2-Dichloropropane	10	47	25	120	
Bromodichloromethane	10	68	Not Detected	Not Detecte	
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detecte	
4-Methyl-2-pentanone	50	210	65	270	
Toluene	10	38	420	1600	
cis-1,3-Dichloropropene	10	46	Not Detected	Not Detecte	
1,1,2-Trichloroethane	10	55	Not Detected	Not Detecte	
Tetrachloroethene	10	69	21000 S	140000 S	
2-Hexanone	50	210	Not Detected	Not Detecte	
Dibromochloromethane	10	86	Not Detected	Not Detecte	
Chlorobenzene	10	47	Not Detected	Not Detecte	
Ethyl Benzene	10	44	300	1300	
m,p-Xylene	10	44	82	360	
o-Xylene	10	44	28	120	
Styrene	10	43	1200 E	5000 E	
Bromoform	10	100	Not Detected	Not Detecte	
1,1,2,2-Tetrachloroethane	10	70	Not Detected	Not Detecte	
1,3-Dichlorobenzene	10	61	Not Detected	Not Detecte	
1,4-Dichlorobenzene	10	61	58	350	
1,2-Dichlorobenzene	10	61	Not Detected	Not Detecte	
cis-1,2-Dichloroethene	10	40	500	2000	

SAMPLE NAME: 11107 a&b

ID#: 9910316-05A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name: h11 Dil. Factor:	10215	Date of Collection: 10/21/99
Dil. Factor:	1.00	Date of Analysis: 11/2/99

#### **TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported**

		** * * * * * **	Amount
Compound	CAS Number	Match Quality	(nG)
Ethane, 1,1,1,2-tetrafluoro-	811-97-2	59 %	280
Methane, dichlorodifluoro-	75-71-8	83 %	22000
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	90 %	29000
Pentane	109-66-0	47 %	59
Ethane, 1,2-dichloro-1,1,2-trifluoro-	354-23-4	91 %	390
Ethane, 1,1,2-trichloro-1,2,2-trifluoro-	76-13-1	64 %	230
Pentane, 2,3,3-trimethyl-	560-21-4	90 %	35
Benzene, (1-methylethyl)-	98-82-8	91 %	330
Decane	124-18-5	93 %	160
Hexane, 3-methyl-	589-34-4	53 %	83

Methane, dichlorodifluoro- and Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro were saturated; data reported as estimated.

E = Exceeds instrument calibration range.

Q = Exceeds Quality Control limits.

S = Saturated peak; data reported as estimated.

		Method
Surrogates	% Recovery	Limits
Dibromofluoromethane	95	72-135
1,2-Dichloroethane-d4	. 86	69-137
Toluene-d8	221 Q	77-124
4-Bromofluorobenzene	54 Q	70-133

SAMPLE NAME: 11104 a&b

#### ID#: 9910316-06A/B

File Name:	h110306	Date of Collection: 10/21/99
Dil. Factor:	1.00	Date of Analysis: 11/3/99

0	Det. Limit	Det. Limit	Amount	Amount
Compound	(nG)	(uG/m3)	(nG)	(uG/m3)
Chloromethane	10	21	Not Detected	Not Detected
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11		57	4000 E	23000 E
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	18	57
Acetone	50	120	Not Detected	Not Detected
Methylene Chloride	10	35	Not Detected	Not Detected
trar.c-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1,1-Dichloroethane	10	41	72	300
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	Not Detected	Not Detected
Chloroform	10	50	29	140
1,1,1-Trichloroethane	10	55	48	270
Carbon Tetrachloride	10	64	Not Detected	Not Detected
Benzene	10	32	Not Detected	Not Detected
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	16	90
1,2-Dichloropropane	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	110	420
cis-1,3-Dichloropropene	10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachloroethene	10	69	2600 S	18000 S
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	Not Detected	Not Detected
m,p-Xylene	10	44	Not Detected	Not Detected
•	10	44	Not Detected	Not Detected
o-Xylene		43	Not Detected	Not Detected
Styrene	10	100	Not Detected  Not Detected	Not Detected
Bromoform	10			Not Detected
1,1,2,2-Tetrachloroethane	10	70	Not Detected	
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	Not Detected	Not Detected
1,2-Dichlorobenzene	10	61	Not Detected	Not Detected
cis-1,2-Dichloroethene	10	40	Not Detected	Not Detected

SAMPLE NAME: 11104 a&b

ID#: 9910316-06A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110306	Date of Collection: 10/21/99
Dif. Factor:	1.00	Date of Analysis: 11/3/99

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Ethene, chlorotrifluoro-	79-38-9	94 %	74
Methane, dichlorodifluoro-	75-71-8	91 %	7700
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	90 %	9000
Ethane, 1,2,2-trichloro-1,1-difluoro-	354-21-2	9 %	130
Unknown	NA	NA	62
Ethane, 1,2-dichloro-1,1,2-trifluoro-	354-23-4	91 %	270
Ethane, 1,1,2-trichloro-1,2,2-trifluoro-	76-13-1	72 %	340
Hexanal	66-25-1	90 %	82
Octanal	124-13-0	78 %	80
Nonanal	124-19-6	78 %	69

Methane, dichlorodifluoro- and Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro were saturated; data reported as estimated.

E = Exceeds instrument calibration range.

S = Saturated peak; data reported as estimated.

		Method
Surrogates	% Recovery	Limits
Dibromofluoromethane	93	72-135
1,2-Dichloroethane-d4	84	69-137
Toluene-d8	113	77-124
4-Bromofluorobenzene	113	70-133

# AIR TOXICS LTD. SAMPLE NAME: 11105, a&b ID#: 9910316-07A/B

File Name: h110308	Date of Collection: 10/21/99
Dil. Factor:	Date of Analysis: 11/3/99

Compound	Det. Limit (nG)	Det. Limit (uG/m3)	Amount (nG)	Amount (uG/m3)
Chloromethane	10	21	Not Detected	Not Detected
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11	10	57	2200 E	13000 E
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	33	100
Acetone	50	120	180	420
Methylene Chloride	10	35	Not Detected	Not Detected
trans-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1.1-Dichloroethane	10	41	430	1800
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	60	180
Chloroform	10	50	150	750
1,1,1-Trichloroethane	10	<b>5</b> 5	13	73
Carbon Tetrachloride	10	64	Not Detected	Not Detected
Benzene	10	32	10	34
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	580	3200
1,2-Dichloropropane	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	130	510
cis-1,3-Dichloropropene	10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachloroethene	10	69	2800 S	19000 S
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	28	120
m,p-Xylene	10	44	32	140
o-Xylene	10	44	21	94
Styrene	10	43	Not Detected	Not Detected
Bromoform	10	100	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	10	70	Not Detected	Not Detected
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	320	1900
1,2-Dichlorobenzene	10	61	Not Detected	Not Detected
cis-1,2-Dichloroethene	10	40	15	60

## AIR TOXICS LTD. 1015 SAMPLE NAME: 11105 a&b

#### ID#: 9910316-07A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name: h110308 Date of Collection: 10/21 Dil. Factor: Date of Analysis: 11/3/99	/99
	<b>2</b> 666 a 1 1

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

			Amount
Compound	CAS Number	<b>Match Quality</b>	(nG)
Methane, dichlorodifluoro-	75-71-8	91 %	5400
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	53 %	5700
2-Pyrazoline, 1-isopropyl-5-methyl-	26964-54-5	90 %	320
Cyclohexane, 1,2,4-trimethyl-	2234-75-5	83 %	240
Cyclohexane, 2,4-diethyl-1-methyl-	61142-70-9	53 %	250
1H-1,2,4-Triazole, 1-ethyl-	16778-70-4	50 %	280
3-Octene, 4-ethyl-	53966-51-1	70 %	320
Cyclohexane, 1-ethyl-1,4-dimethyl-, cis-	62238-30-6	64 %	260
4-Octene, 2,6-dimethy!-, [S-(E)]-	62960-76-3	76 %	160
Decane, 2,3,8-trimethyl-	62238-14-6	59 %	220

Methane, dichlorodifluoro- and Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro were saturated; data reported as estimated.

E = Exceeds instrument calibration range.

S = Saturated peak; data reported as estimated.

		Method	
Surrogates	% Recovery	Limits	
Dibromofluoromethane	92	72-135	
1,2-Dichloroethane-d4	83	69-137	
Toluene-d8	112	77-124	
4-Bromofluorobenzene	108	70-133	

Not Detected

Not Detected

Not Detected

Not Detected

Not Detected

Not Detected

## AIR TOXICS LTD.

SAMPLE NAME: 11002 a&b

ID#: 9910316-08A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name: Dil. Factor:	그 회사가 했다면 하시는 이 살았다. 그는 것 같아 그는 그는 그 그 그 그 그 그 그를 가는 것이다.		Date of Collection: 10/21/99 Date of Analysis: 11/3/99	
Compound	Det. Limit (nG)	Det. Limit (uG/m3)	Amount (лG)	Amount (uG/m3)
Chloromethane	10	21	Not Detected	Not Detected
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11	10	57	12	66
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	28	89
Acetone	50	120	Not Detected	Not Detected
Methylene Chloride	10	35	Not Detected	Not Detected
rans-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1.1-Dichloroethane	10	41	Not Detected	Not Detected
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	Not Detected	Not Detected
Chloroform	10	50	Not Detected	Not Detected
1,1,1-Trichloroethane	10	55	Not Detected	Not Detected
Carbon Tetrachloride	10	64	Not Detected	Not Detected
Benzene	10	32	13	44
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	Not Detected	Not Detected
1,2-Dichloropropane	10	47	Not Detected	Not Detected
Bromodichloromethane	<del></del>	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	100	400
cis-1,3-Díchloropropene	10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10		Not Detected	Not Detected
Tetrachloroethene	10	69	Not Detected	Not Detected
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	Not Detected	Not Detecte
m,p-Xylene	10	44	34	150
o-Xylene	10	44	11	48
Styrene	10	43	Not Detected	Not Detecte
		100	Nathana	Mat Datasta

10

10

10

10

10

10

Bromoform

1,1,2,2-Tetrachloroethane

1,3-Dichlorobenzene

1,4-Dichlorobenzene

1,2-Dichlorobenzene

cis-1,2-Dichloroethene

100

70

61

61

61

40

Not Detected

Not Detected

Not Detected

Not Detected

Not Detected

Not Detected

SAMPLE NAME: 11002 a&b

ID#: 9910316-08A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110310	Date	of Collection: 10/21/99
Dil. Factor:	1.00	Date	of Analysis: 11/3/99

TENTATIVEL	Y IDENTIFIED COMPOUNDS - Top 1	o neported	Amount
Compound	CAS Number	Match Quality	(nG)
Hexane, 3-methyl-	589-34-4	87 %	120
Heptane	142-82-5	64 %	340
3-Cyclohepten-1-one	1121-64-8	83 %	310
Hexanal	66-25-1	83 %	120
Heptanal	111-71-7	50 %	84
.alphaPinene	80-56-8	96 %	550
Camphene	79 <b>-92-5</b>	80 %	680
.betaPhellandrene	555-10-2	87 %	120
.betaPinene	127-91-3	91 %	260
Limonene	138-86-3	91 %	130

		Method	
Surrogates	% Recovery	Limits	
Dibromofluoromethane	93	72-135	
1,2-Dichloroethane-d4	90	69-137	
Toluene-d8	106	77-124	
4-Bromofluorobenzene	111	70-133	

SAMPLE NAME : 11024 a&b ID#: 9910332-02A/B

File Name:	h110313		Date of Collection: 10/22/99
Dil. Factor:	1.00	**	Date of Analysis: 11/3/99

Compound	Det. Limit (nG)	Det. Limit (uG/m3)	Amount (nG)	Amount (uG/m3)
Chloromethane	10	21	Not Detected	Not Detected
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11	10	57	14	78
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	Not Detected	Not Detected
Acetone	50	120	100	250
Methylene Chloride	10	35	Not Detected	Not Detected
trans-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1,1-Dichloroethane	10	41	Not Detected	Not Detected
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	34	100
Chloroform	10	50	Not Detected	Not Detected
1,1,1-Trichloroethane	10	55	Not Detected	Not Detected
Carbon Tetrachloride	10	64	Not Detected	Not Detected
Benzene	10	32	Not Detected	Not Detected
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	Not Detected	Not Detected
1,2-Dichloropropaяe	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	Not Detected	Not Detected
cis-1,3-Dichloropropene	10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachloroethene	10	69	Not Detected	Not Detected
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	Not Detected	Not Detected
m,p-Xylene	10	44	Not Detected	Not Detected
o-Xylene	10	44	Not Detected	Not Detected
Styrene	10	43	Not Detected	Not Detected
Bromoform	10	100	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	10	70	Not Detected	Not Detected
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	Not Detected	Not Detected
1,2-Dichlorobenzene	10	61	Not Detected	Not Detected
cis-1,2-Dichloroethene	10	40	Not Detected	Not Detected

SAMPLE NAME: 11024 a&b

ID#: 9910332-02A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110313	Date of Collection: 10/22/99
Dil. Factor:	1.00	Date of Analysis: 11/3/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

			Amount
Compound	CAS Number	Match Quality	(nG)
.alphaPinene	80-56-8	96 %	1700
Camphene	79-92-5	91 %	4400
.betaPinene	127-91-3	94 %	740
Cyclohexene, 4-methylene-1-(1-methylethy	99-84-3	91 %	2300
3-Octanone	106-68-3	91 %	72
Octanal	124-13-0	90 %	88
Limonene	138-86-3	91 %	1100
Cineole	470-82-6	91 %	220
Nonanal	124-19-6	83 %	140
1,3-Benzodioxole, 5-(1-propenyl)-	120-38-1	95 %	280

		Method
Surrogates	% Recovery	Limits
Dibromofluoromethane	95	72-135
1,2-Dichloroethane-d4	84	69-137
Toluene-d8	105	77-124
4-Bromofluorobenzene	101	70-133

SAMPLE NAME: 11017 a&b

ID#: 9910332-06A/B

File Name:	h110317		Date of Collection: 10/22/99
Dil. Factor:	1.00	••	Date of Analysis: 11/3/99

	Det. Limit	Det. Limit	Amount	Amount
Compound	(nG)	(uG/m3)	(nG)	(uG/m3)
Chloromethane	10	21	Not Detected	Not Detected
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11	10	57	27	150
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	Not Detected	Not Detected
Acetone	50	120	94	230
Methylene Chloride	10	35	Not Detected	Not Detected
trans-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1,1-Dichloroethane	10	41	Not Detected	Not Detected
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	57	170
Chloroform	10	50	Not Detected	Not Detected
1,1,1-Trichloroethane	10	55	Not Detected	Not Detected
Carbon Tetrachloride	10	64	Not Detected	Not Detected
Benzene	10	32	Not Detected	Not Detected
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	Not Detected	Not Detected
1,2-Dichloropropane	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	Not Detected	Not Detected
cis-1,3-Dichloropropene	10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachloroethene	10	69	12	79
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	Not Detected	Not Detected
m,p-Xylene	10	44	Not Detected	Not Detected
o-Xylene	10	44	Not Detected	Not Detected
Styrene	10	43 .	Not Detected	Not Detected
Bromoform	10	100	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	10	70	Not Detected	Not Detected
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	Not Detected	Not Detected
1,2-Dichlorobenzene	10	61	Not Detected	Not Detected
cis-1,2-Dichloroethene	10	40	Not Detected	Not Detected
S.S. T.E. BIGING TOURS				

SAMPLE NAME: 11017 a&b

ID#: 9910332-06A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110317	Date of Collection: 10/22/99
Dil. Factor:	1.00	Date of Analysis: 11/3/99

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported Amount **CAS Number** Match Quality (nG) Compound 120 Propane, 1,1,1,3,3,3-hexafluoro-690-39-1 56 % 91 % 210 3-Cyclohepten-1-one 1121-64-8 80-56-8 95 % 78 .alpha.-Pinene 79-92-5 93 % 53 Camphene 55 3-Carene 13466-78-9 95 % 90 % 110 124-13-0 Octanal 124-19-6 83 % 63 Nonanal

		Method
Surrogates	% Recovery	Limits
Dibromofluoromethane	89	72-135
1,2-Dichloroethane-d4	78	69-137
Toluene-d8	108	77-124
4-Bromofluorobenzene	106	70-133

SAMPLE NAME: 11110 a&b

ID#: 9910332-08A/B

File Name:	h110319	 Date of Collection: 10/22/99
Dil. Factor:	1.00	Date of Analysis: 11/3/99

Compound	Det. Limit (nG)	Det. Limit (uG/m3)	Amount (nG)	Amount (uG/m3)
Chloromethane	10	21	59	120
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11	10	57	23	130
	10	40	Not Detected	Not Detected
1,1-Dichloroethene Carbon Disulfide	10	32	11	35
	50	120	130	300
Acetone		35	Not Detected	Not Detected
Methylene Chloride	10	40	Not Detected	Not Detected Not Detected
trans-1,2-Dichloroethene	10	41	Not Detected	Not Detected
1,1-Dichloroethane	10		Not Detected  Not Detected	Not Detected
Vinyl Acetate	50	180	· · · · · · · · · · · · · · · · · · ·	- · · -
2-Butanone (Methyl Ethyl Ketone)	50	150	63	190
Chioroform	10	50	Not Detected	Not Detected
1,1,1-Trichloroethane	10	55	Not Detected	Not Detected
Carbon Tetrachloride	10	64	Not Detected	Not Detected
Benzene	10	32	22	72
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	Not Detected	Not Detected
1,2-Dichloropropane	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	18	68
cis-1,3-Dichloropropene	10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachloroethene	10	69	10	72
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	Not Detected	Not Detected
m,p-Xylene	10	44	Not Detected	Not Detected
o-Xylene	10	44	Not Detected	Not Detected
Styrene	10	43	Not Detected	Not Detected
Bromoform	10	100	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	10	70	Not Detected	Not Detected
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	Not Detected	Not Detected
		61	Not Detected	Not Detected
1,2-Dichlorobenzene cis-1,2-Dichloroethene	10 10	40	Not Detected	Not Detected

SAMPLE NAME: 11110 a&b

ID#: 9910332-08A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110319	Date of Collection: 10/22/99
Dil. Factor:	1.00	Date of Analysis: 11/3/99

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

			Amount
Compound	CAS Number	Match Quality	(nG)
3-Butenoic acid	625-38-7	74 %	58
Octanal	124-13-0	78 %	76
Nonanal	124-19-6	83 %	97

		Method	
Surrogates	% Recovery	Limits	
Dibromofluoromethane	89	72-135	
1,2-Dichloroethane-d4	80	69-137	
Toluene-d8	104	77-124	
4-Bromofluorobenzene	103	70-133	

SAMPLE NAME: 11214 a&b

ID#: 9910376-02A/B

#### Modified VOST 5041A GC/MS Full Scan

	File Name:	hii 10407 Date of Collection: 10/25/99  Date of Analysis: 11/4/99
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	17
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	10
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	10
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1.4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified

SAMPLE NAME: 11214 a&b

ID#: 9910376-02A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name h110407 Date of Collection: 10/25/99 Dis Factors 1.00 P Date of Analysis: 11/4/99
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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported CAS Number Match Quality Compound

Amount (nG)

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	89	72-135
1,2-Dichloroethane-d4	72	69-137
Toluene-d8	106	77-124
4-Bromofluorobenzene	111	70-133

SAMPLE NAME: 11006 a&b

ID#: 9910316-09A/B

File Name: h110311	Date of Collection: 10/21/99
Dil. Factor:	Date of Analysis: 11/3/99

Carra aad	Det. Limit	Det. Limit	Amount	Amount
Compound	(nG)	(uG/m3)	(nG) Not Detected	(uG/m3) Not Detected
Chloromethane	10	21		
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11		57	12	67
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	16	51
Acetone	50	120	58	140
Methylene Chloride	10	35	Not Detected	Not Detected
trans-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1,1-Dichloroethane	10	41	Not Detected	Not Detected
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	Not Detected	Not Detected
Chloroform	10	50	Not Detected	Not Detected
1,1,1-Trichloroethane	10	55	Not Detected	Not Detected
Carbon Tetrachloride	10	64	Not Detected	Not Detected
Benzene	10	32	Not Detected	Not Detected
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	Not Detected	Not Detected
1,2-Dichloropropane	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	Not Detected	Not Detected
cis-1,3-Dichloropropene	10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachloroethene	10	69	Not Detected	Not Detected
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	Not Detected	Not Detected
m,p-Xylene	10	44	12	55
	10	44	Not Detected	Not Detected
o-Xylene		43	Not Detected	Not Detected
Styrene	10		Not Detected	Not Detected
Bromoform	10			Not Detected
1,1,2,2-Tetrachloroethane	10		Not Detected	
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	Not Detected	Not Detected
1,2-Dichlorobenzene	10	61	Not Detected	Not Detected
cis-1,2-Dichloroethene	10	40	Not Detected	Not Detected

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## AIR TOXICS LTD.

SAMPLE NAME: 11006 a&b

ID#: 9910316-09A/B

#### Modified VOST 5041A GC/MS Full Scan

	File Name:	h110311 Date of Colle	ction: 10/21/99
١	Dil. Factor:	1.00 Date of Anal	ysis: 11/3/99

**TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported** Amount Compound CAS Number **Match Quality** (nG) 75-71-8 72 % 53 Methane, dichlorodifluoro-45 75-45-6 74% Methane, chlorodifluoro-90 % 1121-64-8 31 3-Cyclohepten-1-one 66-25-1 90 % 45 Hexanal 111-71-7 16 % 35 Heptanal

124-13-0

124-19-6

86 %

83 %

Container Type: VOST Tube

Octanal

Nonanal

		Method Limits	
Surrogates	% Recovery		
Dibromofluoromethane	95	72-135	
1,2-Dichloroethane-d4	87	69-137	
Toluene-d8	104	77-124	
4-Bromofluorobenzene	103	70-133	

SAMPLE NAME: 11023 a&b

ID#: 9910332-05A/B

File Name:	h11031	3	Date of Collection: 10/22/99
Dil. Factor:	1.00		Date of Analysis: 11/3/99

	Det. Limit	Det. Limit	Amount	Amount
Compound	(nG)	(uG/m3)	(nG)	(uG/m3)
Chloromethane	10	21	Not Detected	Not Detected
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11	10	57	18	100
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	23	72
Acetone	50	120	100	240
Methylene Chloride	10	35	Not Detected	Not Detected
trans-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1,1-Dichloroethane	10	41	Not Detected	Not Detected
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	Not Detected	Not Detected
Chloroform	10	50	Not Detected	Not Detected
1,1,1-Trichloroethane	10	55	Not Detected	Not Detected
Carbon Tetrachloride	10	64	Not Detected	Not Detected
Benzene	10	32	10	34
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	Not Detected	Not Detected
1,2-Dichloropropane	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	19	72
cis-1,3-Dichlòropropene	10	. 46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachloroethene	10	<b>6</b> 9	690	4800
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	14	61
m,p-Xylene	10	44	Not Detected	Not Detected
o-Xylene	10	44	Not Detected	Not Detected
Styrene	10	43	Not Detected	Not Detected
Bromoform	10	100	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	10	70	Not Detected	Not Detected
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	Not Detected	Not Detected
1,2-Dichlorobenzene	10	61	Not Detected	Not Detected
cis-1,2-Dichloroethene	10	40	Not Detected	Not Detected

SAMPLE NAME: 11023 a&b

ID#: 9910332-05A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110316	-	V	Date of Collection: 10/22/99
Dil. Factor:	1.00			Date of Analysis: 11/3/99

	TIFIED COMPOUNDS - Top 1		Amount
Compound	CAS Number	Match Quality	(nG)
Unknown	NA	NA	380
Methane, dichlorodifluoro-	75-71-8	43 %	380
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	90 %	1100
3-Cyclohepten-1-one	1121-64-8	91 %	1500
.alphaPinene	80-56-8	95 %	120
Camphene	79-92-5	91 %	180
Octanal	124-13-0	90 %	88
Nonanal	124-19-6	83 %	170

		Method
Surrogates	% Recovery	Limits
Dibromofluoromethane	91	72-135
1,2-Dichloroethane-d4	79	69-137
Toluene-d8	111	77-124
4-Bromofluorobenzene	101	70-133

SAMPLE NAME: 11013 a&b

ID#: 9910332-07A/B

File Name:	h110318	Date of Collection: 10/22/99
Dil. Factor:	1.00	Date of Analysis: 11/3/99

	Det. Limit	Det. Limit	Amount	Amount
Compound	(nG)	(uG/m3)	(nG)	(uG/m3)
Chloromethane	10	21	Not Detected	Not Detected
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11	10	57	18	100
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	26	83
Acetone	50	120	Not Detected	Not Detected
Methylene Chloride	10	35	Not Detected	Not Detected
trans-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1,1-Dichloroethane	10	41	Not Detected	Not Detected
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	Not Detected	Not Detected
Chloroform	10	50	Not Detected	Not Detected
1,1,1-Trichloroethane	10	55	Not Detected	Not Detected
Carbon Tetrachloride	10	64	Not Detected	Not Detected
Benzene	10	32	Not Detected	Not Detected
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	Not Detected	Not Detected
1,2-Dichloropropane	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	16	62
cis-1,3-Dichloropropene	10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachloroethene	10	69	530	3600
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	Not Detected	Not Detected
m,p-Xylene	10	44	Not Detected	Not Detected
o-Xylene	10	44	Not Detected	Not Detected
Styrene	10	43	Not Detected	Not Detected
Bromoform	10	100	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	10	70	Not Detected	Not Detected
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	Not Detected	Not Detected
1,2-Dichlorobenzene	10	61	Not Detected	Not Detected
cis-1,2-Dichloroethene	10	40	Not Detected	Not Detected

SAMPLE NAME: 11013 a&b

ID#: 9910332-07A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110318	Date of Collection: 10/22/99
Dil. Factor:	1.00	Date of Analysis: 11/3/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported					
Compound	CAS Number	Match Quality	Amount (nG)		
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	58 %	180		
3-Carene	13466-78-9	58 %	120		
.alphaPinene	80-56-8	96 %	2700		
Camphene	79-92-5	91 %	5300		
Bicyclo[3.1.0]hexane, 4-methylene-1-(1-m	3387-41-5	90 %	720		
Cyclohexene, 4-methylene-1-(1-methylethy	99-84-3	91 %	2400		
Bicyclo[3.1.0]hex-2-ene, 2-methyl-5-(1-m	2867-05-2	64 %	87		
Octanal	124-13-0	90 %	75		
Limonene	138-86-3	94 %	1000		
Nonanal	124-19-6	83 %	88		

		Method
Surrogates	% Recovery	Limits
Dibromofluoromethane	87	72-135
1,2-Dichloroethane-d4	75	69-137
Toluene-d8	108	77-124
4-Bromofluorobenzene	92	70-133

SAMPLE NAME: 11008 a&b

#### ID#: 9910376-03A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110406 Date of Collection: 10/25/99 5 Date of Analysis: 11/4/99
DII. Factor:	7-72 F.00

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	13
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50 .	Not Detected
Chloroform	10	14
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	47
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	. 10	98
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	32
m,p-Xylene	10	50
o-Xylene	10	18
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1.4-Dichlorobenzene	10	Not Detected
1.2-Dichlorobenzene	10	Not Detected
cis-1.2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Butane	106-97-8	72 %	98
Unknown	NA	NA	77

SAMPLE NAME: 11008 a&b

ID#: 9910376-03A/B

#### Modified VOST 5041A GC/MS Full Scan

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File Name: ht10406 Date of Collect Dil. Factor: 1.00 Date of Analys	is:-11/4/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
Pentane	109-66-0	59 %	91
Heptane	142-82-5	59 %	110
Heptane, 2-methyl-	592-27-8	86 %	55
Nonane	111-84-2	83 %	57

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	90	72-135
1,2-Dichloroethane-d4	74	69-137
Toluene-d8	109	77-124
4-Bromofluorobenzene	115	70-133

SAMPLE NAME: 11106 a&b

#### ID#: 9910316-04A/B

File Name:	h110214 Date of Collection: 10/21/99
Dil. Factor:	1.00 Date of Analysis: 11/2/99

Compound	Det. Limit (nG)	Det. Limit (uG/m3)	Amount (nG)	Amount (uG/m3)
Chloromethane	10	21	Not Detected	Not Detected
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11	10	57	14	82
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	Not Detected	Not Detected
Acetone	50	120	Not Detected	Not Detected
Methylene Chloride	10	35	Not Detected	Not Detected
trans-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1,1-Dichloroethane	10	41	Not Detected	Not Detected
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	Not Detected	Not Detected
Chloroform	10	50	Not Detected	Not Detected
1,1,1-Trichloroethane	10	55	Not Detected	Not Detected
Carbon Tetrachloride	10	64	Not Detected	Not Detected
Benzene	10	32	Not Detected	Not Detected
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	Not Detected	Not Detected
1,2-Dichloropropáne	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	Not Detected	Not Detected
cis-1,3-Dichloropropene	10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachloroethene	10	69	Not Detected	Not Detected
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	Not Detected	Not Detected
m,p-Xylene	10	44	Not Detected	Not Detected
o-Xylene	10	44	Not Detected	Not Detected
Styrene	10	43	Not Detected	Not Detected
Bromoform	10	100	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	10	70	Not Detected	Not Detected
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	Not Detected	Not Detected
1,2-Dichlorobenzene	10	61	Not Detected	Not Detected
cis-1,2-Dichloroethene	10	40	Not Detected	Not Detected

SAMPLE NAME: 11106 a&b

ID#: 9910316-04A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110214	Date of Collection: 10/21/99
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Dil. Factor:	1.00	Date of Analysis: 11/2/99

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	31
Octanal	124-13-0	90 %	71
Nonanai	124-19-6	83 %	73

		Method
Surrogates	% Recovery	Limits
Dibromofluoromethane	94	72-135
1,2-Dichloroethane-d4	87	69-137
Toluene-d8	98	77-124
4-Bromofluorobenzene	108	70-133

SAMPLE NAME: 11218 a&b

#### ID#: 9910432-03A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	n110517	Date of Collection: 10/27/99
Dil. Factor:	1.00	 Date of Analysis: 11/5/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	16
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	11
Acetone	50	120
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	31
1,1,1-Trichloroethane	10	18
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane -	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
3-Butenoic acid	625-38-7	83 %	27
Pentane	109-66-0	53 %	52

SAMPLE NAME: 11218 a&b

ID#: 9910432-03A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	n110517	Date of Collection: 10/27/99
Dil. Factor:	1.00	Date of Analysis: 11/5/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported				
Compound	CAS Number	Match Quality	Amount (nG)	
1-Octene	111-66-0	93 %	71	
Heptanal	111-71-7	52 %	35	
Octanal	124-13-0	47 %	100	
Nonanal	124-19-6	56 %	240	
Dodecanal	112-54-9	64 %	92	
2-Undecanone	112-12-9	91 %	38	
1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1	<b>9</b> 5 %	65	
Tetradecane	629-59-4	93 %	95	

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	101	72-135
1,2-Dichloroethane-d4	106	69-137
Toluene-d8	102	77-124
4-Bromofluorobenzene	96	70-133

SAMPLE NAME: 11206 a&b

ID#: 9910432-02A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	n110516	Date of Collection: 10/27/99
Dil. Factor:	1.00	Date of Analysis: 11/5/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	20
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	22
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	· 10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Hexanal	66-25-1	72 %	47
Heptanal	111-71-7	43 %	76

SAMPLE NAME: 11206 a&b

ID#: 9910432-02A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	* .	n110516 Date of Collection: 10/27/99
Dil. Factor:		1.00 Date of Analysis: 11/5/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported				
Compound	CAS Number	Match Quality	Amount (nG)	
Octanal	124-13-0	60 %	170	
Dodecane	112-40-3	90 %	74	
Nonanal	124-19-6	83 %	190	
Undecane	1120-21-4	83 %	31	
Dodecanal	112-54-9	72 %	55	
1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1	95 %	100	
Tetradecane	629-59-4	93 %	51	

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	100	72-135
1,2-Dichloroethane-d4	106	69-137
Toluene-d8	109	77-124
4-Bromofluorobenzene	100	70-133

#### SAMPLE NAME: 11211 a&b

#### ID#: 9910396-05A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	n110514	Date of Collection: 10/25/99
Dil. Factor:	1.00	Date of Analysis: 11/5/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	<b>3</b> 3
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	18
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	120
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	190
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	78 %	200

SAMPLE NAME: 11211 a&b

ID#: 9910396-05A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	n110514	Date of Collection: 10/25/99
Dil. Factor:	1.00	Date of Analysis: 11/5/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
Cyclopentanol, 2-methyl-	24070-77-7	53 %	81
Nonanal	124-19-6	83 %	58
Naphthalene, decahydro-4a-methyl-1-methy	515-17-3	64 %	74
Naphthalene, 1,2,3,5,6,8a-hexahydro-4,7-	483-76-1	90 %	54
Unknown	NA	NA	250
1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1	95 %	240

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	99	72-135
1,2-Dichloroethane-d4	102	69-137
Toluene-d8	102	77-124
4-Bromofluorobenzene	98	70-133

#### SAMPLE NAME: 11225 a&b

#### ID#: 9910396-04A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	n110512	Date of Collection: 10/25/99
Dil. Factor:	1.00	Date of Analysis: 11/5/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	29
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	32
Acetone	50	82
Methylene Chloride	10	13
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Viny! Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	180
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	620
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	320
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	86 %	370

SAMPLE NAME: 11225 a&b

ID#: 9910396-04A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	n110512	Date of Collection: 10/25/99
Dil. Factor:	1.00	Date of Analysis: 11/5/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
Butane, 1-methoxy-2-methyl-	62016-48-2	83 %	250
.alphaPinene	80-56-8	86 %	15000
Bicyclo[4.1.0]heptane, 7-(1-methylethyli	53282-47-6	94 %	1400
.betaPinene	127-91-3	72 %	820
1,3,6-Heptatriene, 2,5,5-trimethyl-	29548-02-5	64 %	830
Limonene	138-86-3	94 %	990
Cineole	470-82-6	93 %	250
Tridecane	629-50-5	78 %	400

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	100	72-135
1,2-Dichloroethane-d4	103	69-137
Toluene-d8	99	77-124
4-Bromofluorobenzene	150 Q	70-133

SAMPLE NAME: 11210 a&b

ID#: 9910396-03A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	n110511	Date of Collection: 10/25/99
Dil. Factor:	1.00	Date of Analysis: 11/5/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	120
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	11
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	410
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, chlorodifluoro-	75-45-6	83 %	130
Ethane, 1,2-dichloro-1,1,2,2-tetrafluoro	76-14-2	72 %	91

SAMPLE NAME: 11210 a&b

ID#: 9910396-03A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	• ,	n110511		Date of Collection: 10/25/99
Dil. Factor:		 1.00	-	Date of Analysis: 11/5/99

	TENTATIVELY IDENTIFIED COMPO	d	
Compound	CAS Number	Match Quality	Amount (nG)
Heptanal	111-71-7	83 %	74
Unknown	NA	NA	160
Nonanal	124-19-6	83 %	220
Hexadecanol	29354-98-1	64 %	70

Container Type: VOST Tube

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	99	72-135
1,2-Dichloroethane-d4	107	69-137
Toluene-d8	100	77-124
4-Bromofluorobenzene	98	70-133

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SAMPLE NAME: 11223 a&b

#### ID#: 9910396-02A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	n110510	Date of Collection: 10/25/99
Dil. Factor:	1.00	Date of Analysis: 11/5/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	35
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	11
Acetone	50	Not Detected
Methylene Chloride	10	11
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	26
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
3-Cyclohepten-1-one	1121-64-8	91 %	2700
Unknown	NA	NA	81

SAMPLE NAME: 11223 a&b

ID#: 9910396-02A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	n110510	Date of Collection: 10/25/99
Dil. Factor:	1.00	Date of Analysis: 11/5/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			d
Compound	CAS Number	Match Quality	Amount (nG)
Octanal	124-13-0	60 %	73
Nonanal	124-19-6	83 %	130
Unknown	NA	NA	56

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	98	72-135
1,2-Dichloroethane-d4	105	69-137
Toluene-d8	100	77-124
4-Bromofluorobenzene	97	70-133

SAMPLE NAME: 11201 a&b

ID#: 9910376-08A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name: Dil. Factor:	rn110508	Date of Collection: 10/25/99 Date of Analysis: 11/5/99
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Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	16
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	26
Acetone	50	Not Detected
Methylene Chloride	10	10
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene '	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	11
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1.2-Dichloroethene	10	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
Unknown	NA	NA	50
Octanal	124-13-0	60 %	80

120

# AIR TOXICS LTD.

SAMPLE NAME: 11201 a&b

ID#: 9910376-08A/B

#### Modified VOST 5041A GC/MS Full Scan

File Names Dil. Factor:	术 n110508		Date of Coll	ection: 10/25/99 ysis: 11/5/99
	TENTATIVELY IDEN	TIFIED COMPO	UNDS - Top 10 Reported	1
Compound		CAS Number	Match Quality	Amount (nG)

124-19-6

83 %

Container Type: VOST Tube

Nonanal

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	100	72-135
1,2-Dichloroethane-d4	104	69-137
Toluene-d8	100	77-124
4-Bromofluorobenzene	98	70-133

### SAMPLE NAME: 11004 a&b

ID#: 9910376-07A/B

#### Modified VOST 5041A GC/MS Full Scan

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1	File Name: Date of Collection: 10/25/99
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ı	Dill Factor: Date of Analysis: 11/5/99
1	File Name:

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	15
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	46
Acetone	50	Not Detected
Methylene Chloride	10	11
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	· 50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chiorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
3-Cyclohepten-1-one	1121-64-8	91 %	990
Nonanal	124-19-6	83 %	53

SAMPLE NAME: 11004 a&b

ID#: 9910376-07A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name: n110507	Date of Collection: 10/25/99
Dit Footors	Date of Collection: 10/25/99 Date of Analysis: 11/5/99;
Dil. Factor.	Date of Analysis. 110/332

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported
Compound CAS Number Match Quality Amount (nG)

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	99	72-135
1,2-Dichloroethane-d4	98	69-137
Toluene-d8	102	77-124
4-Bromofluorobenzene	97	70-133

### SAMPLE NAME: 11111 a&b

#### ID#: 9910376-06A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name 2 2 2 110506 2 2 2 Date of Collection: 1	0/25/99
Dil. Factor: - Date of Analysis: 11	/5/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10 .	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	11
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	59
Acetone	50	Not Detected
Methylene Chloride	10	11
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
Unknown	NA	NA	81
Nonanal	124-19-6	72 %	58

SAMPLE NAME: 11111 a&b

ID#: 9910376-06A/B

#### Modified VOST 5041A GC/MS Full Scan

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Dil. Factor:	Date of Collection: 10/25/99 A1:00 Date of Analysis: 11/5/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported CAS Number Match Quality Compound Amount (nG)

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	99	72-135
1,2-Dichloroethane-d4	100	69-137
Toluene-d8	100	77-124
4-Bromofluorobenzene	98	70-133

### SAMPLE NAME: 11102 a&b

#### ID#: 9910376-05A/B

#### Modified VOST 5041A GC/MS Full Scan

Compound	_Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	14
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	39
Acetone	50	Not Detected
Methylene Chloride	10	39
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1.2-Dichloroethene	10	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
2-Butenal, (E)-	123-73-9	78 %	55

SAMPLE NAME: 11102 a&b

ID#: 9910376-05A/B

### Modified VOST 5041A GC/MS Full Scan

File Name: n110505 to 2 Date of Collection: 10/25/99  Dil. Factor: Date of Analysis: 11/5/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported CAS Number Match Quality

Compound

Amount (nG)

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	107	72-135
1,2-Dichloroethane-d4	98	69-137
Toluene-d8	91	77-124
4-Bromofluorobenzene	98	70-133

SAMPLE NAME: 11215 a&b

ID#: 9910432-05A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h110607	Date of Collection: 10/27/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	72
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	80
Acetone	50	94
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	52
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	15
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichlorgethene	10	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
2(1H)-Pyrimidinethione, 4-amino-	333-49-3	64 %	58
Methane, dichlorodifluoro-	75-71-8	83 %	73

SAMPLE NAME: 11215 a&b

ID#: 9910432-05A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h110607	Date of Collection: 10/27/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
Hexanal	66-25-1	47 %	36
Heptanal	111-71-7	72 %	48
Octanal	124-13-0	53 %	93
Nonanal	124-19-6	72 %	240
Dodecanal	112-54-9	47 %	73

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	108	72-135
1,2-Dichloroethane-d4	127	69-137
Toluene-d8	111	77-124
4-Bromofluorobenzene	121	70-133

### SAMPLE NAME: 11224 a&b

#### ID#: 9910432-09A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h110611	Date of Collection: 10/27/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	26
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	20
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	13
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	. 10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
Unknown Freon	NA	NA.	180
Unknown Freon	NA	NA	330

SAMPLE NAME: 11224 a&b

ID#: 9910432-09A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	• • • • • • • • • • • • • • • • • • •	h110611	Date of Collection: 10/27/99
Dil. Factor:		1.00	Date of Analysis: 11/6/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
1-Propene, 1,1,3,3,3-pentafluoro-	690-27-7	91 %	100
Unknown	NA	NA	170
Unknown	NA	NA	170
Propane, 1,1,1,3,3,3-hexafluoro-	690-39-1	78 %	1300
3-Cyclohepten-1-one	1121-64-8	91 %	210
Octanal	124-13-0	64 %	140
Nonanal	124-19-6	72 %	390
Decanal	112-31-2	64 %	130

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	109	72-135
1,2-Dichloroethane-d4	132	69-137
Toluene-d8	102	77-124
4-Bromofluorobenzene	115	70-133

## SAMPLE NAME: 11313 a&b

#### ID#: 9910471-02A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	- h110909 Date of Collection	n: 10/29/99
	- h110909 Date of Collection  1.00 Date of Analysis:	14/0/00
Dil. Factor:	Jate of Analysis:	11/9/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	32
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Djchloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

Compound	CAS Number	<b>Match Quality</b>	Amount (nG)
Unknown	NA	NA	160
Decanal	112-31-2	80 %	83

SAMPLE NAME: 11313 a&b

ID#: 9910471-02A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name: h110909 Date of Collection: 10/2 Dil. Factor: 1.00 Date of Analysis: 11/9/9
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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amo

Amount (nG)

Q = Exceeds Quality Control limits.
Container Type: VOST Tube

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	112	72-135
1,2-Dichloroethane-d4	145 Q	69-137
Toluene-d8	94	77-124
4-Bromofluorobenzene	124	70-133

# 000055

# AIR TOXICS LTD.

SAMPLE NAME: 11222 a&b

#### ID#: 9910444-05A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h110615	Date of Collection: 10/28/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	34
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	38
Acetone	50	57
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	13
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Butanoic acid, heptafluoro-, sodium salt	2218-54-4	90 %	110
Propane, 1,1,1,3,3,3-hexafluoro-	690-39-1	64 %	170

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SAMPLE NAME: 11222 a&b

ID#: 9910444-05A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h110615	Date of Collection: 10/28/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

	TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported		
Compound	CAS Number Match Quality		Amount (nG)
Unknown	NA	NA	63
Octanal	124-13-0	80 %	90
Nonanal	124-19-6	72 %	250
Dodecanal	112-54-9	90 %	64

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	112	72-135
1,2-Dichloroethane-d4	133	69-137
Toluene-d8	101	77-124
4-Bromofluorobenzene	118	70-133

### SAMPLE NAME: 11315 a&b

#### ID#: 9910471-04A/B

#### Modified VOST 5041A GC/MS Full Scan

ŀ	File Name: n111107 Date of Collection: 10/29/99 Dil. Factor: 1.00 Date of Analysis: 11/11/99
-1	Dil. Factor: 2. Dafe of Analysis: 11/11/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	22
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	N∋t Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	19
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
2-Butenal, (E)-	123-73-9	64 %	73
Nonanal	124-19-6	56 %	120

SAMPLE NAME: 11315 a&b

ID#: 9910471-04A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	n111	107	Date of Collection	n: 10/29/99
Dil. Factor:		.00	Date of Analysis:	100
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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported				
Compound	CAS Number	Match Quality	Amount (nG)	
Dodecanal	112-54-9	50 %	51	

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	100	72-135
1,2-Dichloroethane-d4	102	69-137
Toluene-d8	101	77-124
4-Bromofluorobenzene	98	70-133

SAMPLE NAME: 11207 a&b

000097

ID#: 9910444-07A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name: h110906 Date of Collection: 10/28/99
Dil. Factor: 1.00 Date of Analysis: 11/9/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	44
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	30
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Djchloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	. 10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chiorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Octanal	124-13-0	58 %	82
Nonanal	124-19-6	72 %	250

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SAMPLE NAME: 11207 a&b

ID#: 9910444-07A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h110906	Date of Collection: 10/28/99
Dil. Factor:	1.00	Date of Analysis: 11/9/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
Decanal	112-31-2	90 %	60

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	112	72-135
1,2-Dichloroethane-d4	137	69-137
Toluene-d8	105	77-124
4-Bromofluorobenzene	119	70-133

#### SAMPLE NAME: 11317 a&b

#### ID#: 9910471-05A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	n111108 S. Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Date of Dat	of Collection: 10/29/99
Dil. Factor:	1.00 Date of	of Analysis: 11/11/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	15
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	18
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	28
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
1,2-Ethanedithiol	540-63-6	50 %	120
.alphaPinene	80-56-8	86 %	9800

SAMPLE NAME: 11317 a&b

ID#: 9910471-05A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name: n111108	Date of Collection: 10/29/99
Dil. Factor: 1.00	Date of Analysis: 11/11/99

Compound	CAS Number	Match Quality	Amount (nG)
Camphene	79-92-5	94 %	1500
Cyclohexene, 4-methylene-1-(1-methylethy	99-84-3	91 %	280
1,3-Cyclohexadiene, 1-methyl-4-(1-methyl	99-86-5	96 %	280
Octanal	124-13-0	80 %	96
Limonene	138-86-3	94 %	320
Benzene, 1,2,3,4-tetramethyl-	488-23-3	91 %	120
Cyclohexene, 1-methyl-4-(1-methylethylid	586-62-9	96 %	94
Nonanal	124-19-6	72 %	240

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	100	72-135
1,2-Dichloroethane-d4	110	69-137
Toluene-d8	100	77-124
4-Bromofluorobenzene	104	70-133

### SAMPLE NAME: 11304 a&b

#### ID#: 9910471-06A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	n111109	Date of Collection: 10/29/99
	아니라 나라라고 있는 가장에게 하면하다 하면 이렇게 됐다.	
Dil. Factor:	1.00	Date of Analysis: 11/11/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	14
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	32
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	11
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	36
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
.alphaPinene	80-56-8	83 %	11000
Camphene	79-92-5	94 %	1500

000073

SAMPLE NAME: 11304 a&b

ID#: 9910471-06A/B

### Modified VOST 5041A GC/MS Full Scan

File Name: 4 n111109 Date of Collection: 10/29/99 Dil. Factor: Date of Analysis: 11/11/99
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TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported				
Compound	CAS Number	Match Quality	Amount (nG)	
Cyclohexene, 4-methylene-1-(1-methylethy	99-84-3	91 %	410	
1,3-Cyclohexadiene, 1-methyl-4-(1-methyl	99-86-5	96 %	110	
Limonene	138-86-3	94 %	280	
Benzene, methyl(1-methylethyl)-	25155-15-1	91 %	53	
Cyclohexene, 1-methyl-4-(1-methylethylid	586-62-9	96 %	72	
Nonanal	124-19-6	83 %	83	
Bicyclo[2.2.1]heptane, 2-chloro-1,7,7-tr	30462-53-4	91 %	54	

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	100	72-135
1,2-Dichloroethane-d4	106	69-137
Toluene-d8	101	77-124
4-Bromofluorobenzene	105	70-133

SAMPLE NAME: 11217 a&b

ID#: 9910432-08A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h110610	Date of Collection: 10/27/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	31
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	. 10	24
Acetone	50	56
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	. 10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachioroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	54
1-Octene	111-66-0	64 %	480

SAMPLE NAME: 11217 a&b

ID#: 9910432-08A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h110610	Date of Collection: 10/27/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

Compound	LY IDENTIFIED COMPOU CAS Number	Match Quality	Amount (nG)
3-Cyclohepten-1-one	1121-64-8	91 %	2100
Unknown	NA	NA	230
Heptanal	111-71-7	43 %	68
Nonane, 3-methylene-	51655-64-2	38 %	91
Octanal	124-13-0	58 %	120
Nonanal	124-19-6	72 %	540
Dodecanal	112-54-9	80 %	70
1,3-Benzodioxole, 5-(2-propenyl)-	94-59-7	90 %	67

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	109	72-135
1,2-Dichloroethane-d4	129	69-137
Toluene-d8	93	77-124
4-Bromofluorobenzene	116	70-133

### SAMPLE NAME: 11310 a&b

#### ID#: 9910444-02A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110612	Date of Collection: 10/28/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	26
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	92
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachjoroethene	10	17
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene 、	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
Octanal	124-13-0	58 %	72
Undecane	1120-21-4	87 %	52

000013

SAMPLE NAME: 11310 a&b

ID#: 9910444-02A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110612	Date of Collection: 10/28/99		
Dil. Factor:	1.00	Date of Analysis: 11/6/99		
TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported				

CompoundCAS NumberMatch QualityAmount (nG)Nonanal124-19-653 %140

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	108	72-135
1,2-Dichloroethane-d4	129	69-137
Toluene-d8	111	77-124
4-Bromofluorobenzene	121	70-133

SAMPLE NAME: 11205 a&b

ID#: 9910444-03A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h110613	Date of Collection: 10/28/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

Vinyl Chloride         10         Not Detected           Bromomethane         10         Not Detected           Chloroethane         10         Not Detected           Freon 11         10         41           1,1-Dichloroethene         10         Not Detected           Carbon Disulfide         10         54           Acetone         50         65           Methylene Chloride         10         Not Detected           trans-1,2-Dichloroethene         10         Not Detected           1,1-Dichloroethane         10         Not Detected           1,1-Dichloroethane         10         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         10         Not Detected           Chloroform         10         Not Detected           1,1,1-Trichloroethane         10         Not Detected           1,2-Dichloroethane         10         Not Detected           1,2-Dichloroethane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           Bromodichloromethane         10         Not Detected           1,2-Dichloropropene         10         Not Detected	Compound	Det. Limit (nG)	Amount (nG)
Bromomethane         10         Not Detected           Chloroethane         10         Not Detected           Freon 1         10         41           1,1-Dichloroethene         10         Not Detected           Carbon Disulfide         10         54           Acetone         50         65           Methylene Chloride         10         Not Detected           trans-1,2-Dichloroethene         10         Not Detected           1,1-Dichloroethane         10         Not Detected           Vinyl Acetate         50         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         10         Not Detected           1,1,1-Trichloroethane         10         Not Detected           1,1,1-Trichloroethane         10         Not Detected           1,1,2-Dichloroptopane         10         Not Detected           Benzene         10         Not Detected           1,2-Dichloroptopane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           Bromodichloromethane         10         Not Detected           Toluene         10         Not Detected	Chloromethane	10	Not Detected
Chloroethane         10         At 1           Freon 11         10         41           1,1-Dichloroethene         10         Not Detected           Carbon Disulfide         10         54           Acetone         50         65           Methylene Chloride         10         Not Detected           trans-1,2-Dichloroethene         10         Not Detected           1,1-Dichloroethane         10         Not Detected           Vinyl Acetate         50         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           C-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         10         Not Detected           1,1,1-Trichloroethane         10         Not Detected           Garbon Tetrachloride         10         Not Detected           Benzene         10         Not Detected           1,2-Dichloroethane         10         Not Detected           1,2-Dichloroethane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           1,2-Dichloropropane         10         Not Detected	Vinyl Chloride	10	Not Detected
Freon 11         10         41           1,1-Dichloroethene         10         Not Detected           Carbon Disulfide         10         54           Acetone         50         65           Methylene Chloride         10         Not Detected           trans-1,2-Dichloroethene         10         Not Detected           1,1-Dichloroethane         10         Not Detected           Vinyl Acetate         50         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         10         Not Detected           1,1,1-Trichloroethane         10         Not Detected           Carbon Tetrachloride         10         Not Detected           Benzene         10         Not Detected           1,2-Dichloroethane         10         Not Detected           1,2-Dichloroptopane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           Bromodichloromethane         10         Not Detected           4-Methyl-2-pentanone         50         Not Detected           Toluene         10         Not Detected	Bromomethane	10	Not Detected
1,1-Dichloroethene         10         Not Detected           Carbon Disulfide         10         54           Acetone         50         65           Methylene Chloride         10         Not Detected           trans-1,2-Dichloroethene         10         Not Detected           1,1-Dichloroethane         10         Not Detected           Vinyl Acetate         50         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         10         Not Detected           1,1,1-Trichloroethane         10         Not Detected           1,2-Dichloroethane         10         Not Detected           1,2-Dichloroethane         10         Not Detected           1,2-Dichloroethane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           1-Methyl-2-pentanone         10         Not Detected           1-Methyl-2-pentanone         50         Not Detected           1,1,2-Trichloroethane         10         Not Detected           1,1,2-Trichloroethane         10         Not Detected           1,1,2-Trichloroethane	Chloroethane	10	Not Detected
1,1-Dichloroethene         10         S4           Carbon Disulfide         10         54           Acetone         50         65           Methylene Chloride         10         Not Detected           trans-1,2-Dichloroethene         10         Not Detected           1,1-Dichloroethane         10         Not Detected           Vinyl Acetate         50         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         10         Not Detected           1,1,1-Trichloroethane         10         Not Detected           1,1,1-Trichloroethane         10         Not Detected           1,2-Dichloroethane         10         Not Detected           1,2-Dichloroethane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           1,2-Dichloropropene         10         Not Detected           4-Methyl-2-pentanone         50         Not Detected           Toluene         10         Not Detected           cis-1,3-Dichloropropene         10         No	Freon 11	10	41
Acetone         50         65           Methylene Chloride         10         Not Detected trans-1,2-Dichloroethene           1,1-Dichloroethane         10         Not Detected trans-1,2-Dichloroethane           1,1-Dichloroethane         10         Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected to Not Detected trans-1,3-Dichloropropane         10         Not Detected to Not Detected to Not Detected to Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene         10         Not Detected trans-1,3-Dichloropropene<	1,1-Dichloroethene	10	Not Detected
Methylene Chloride         10         Not Detected trans-1,2-Dichloroethene         10         Not Detected trans-1,2-Dichloroethene         10         Not Detected trans-1,2-Dichloroethane         10         Not Detected to the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control transcription of the control tra	Carbon Disulfide	10	54
trans-1,2-Dichloroethane         10         Not Detected           1,1-Dichloroethane         10         Not Detected           Vinyl Acetate         50         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         10         Not Detected           1,1,1-Trichloroethane         10         Not Detected           1,1,1-Trichloroethane         10         Not Detected           Carbon Tetrachloride         10         Not Detected           Benzene         10         Not Detected           1,2-Dichloroethane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           1,2-Dichloropropene         10         Not Detected           4-Methyl-2-pentanone         50         Not Detected           Toluene         10         Not Detected           cis-1,3-Dichloropropene         10         Not Detected           1,1,2-Trichloroethane         10         Not Detected           Tetrachloroethane         10         Not Detected           1,2-Trichloroethane         50         Not Detected           Dibromochloromethane </td <td>Acetone</td> <td>50</td> <td>65</td>	Acetone	50	65
trans-1,2-Dichloroethane         10         Not Detected           1,1-Dichloroethane         10         Not Detected           Vinyl Acetate         50         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         10         Not Detected           1,1,1-Trichloroethane         10         Not Detected           1,1,1-Trichloroethane         10         Not Detected           Carbon Tetrachloride         10         Not Detected           Benzene         10         Not Detected           1,2-Dichloroethane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           1,2-Dichloropropene         10         Not Detected           4-Methyl-2-pentanone         50         Not Detected           Toluene         10         Not Detected           cis-1,3-Dichloropropene         10         Not Detected           1,1,2-Trichloroethane         10         Not Detected           Tetrachloroethane         10         Not Detected           1,2-Trichloroethane         50         Not Detected           Dibromochloromethane </td <td>Methylene Chloride</td> <td>10</td> <td>Not Detected</td>	Methylene Chloride	10	Not Detected
Vinyl Acetate         50         Not Detected           2-Butanone (Methyl Ethyl Ketone)         50         Not Detected           Chloroform         10         Not Detected           1,1,1-Trichloroethane         10         Not Detected           Carbon Tetrachloride         10         Not Detected           Benzene         10         Not Detected           1,2-Dichloroethane         10         Not Detected           1,2-Dichloroptopane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           1,2-Dichloropropane         10         Not Detected           1,3-Dichloropropene         10         Not Detected           4-Methyl-2-pentanone         50         Not Detected           Toluene         10         Not Detected           cis-1,3-Dichloropropene         10         Not Detected           1,1,2-Trichloroethane         10         Not Detected           1,1,2-Trichloroethane         10         Not Detected           1-1,2-Trichloroethane         10         Not Detected           1,1,2-Trichloroethane         10         Not Detected           1,1,2-Trichloroethane         10         Not Detected           1,2-Hexanone		10	Not Detected
2-Butanone (Methyl Ethyl Ketone)       50       Not Detected         Chloroform       10       Not Detected         1,1,1-Trichloroethane       10       Not Detected         Carbon Tetrachloride       10       Not Detected         Benzene       10       Not Detected         1,2-Dichloroethane       10       Not Detected         Trichloroethene       10       Not Detected         1,2-Dichloropropane       10       Not Detected         Bromodichloromethane       10       Not Detected         trans-1,3-Dichloropropene       10       Not Detected         4-Methyl-2-pentanone       50       Not Detected         Toluene       10       Not Detected         cis-1,3-Dichloropropene       10       Not Detected         1,1,2-Trichloroethane       10       Not Detected         1,1,2-Trichloroethane       10       Not Detected         Tetrachloroethane       10       Not Detected         Dibromochloromethane       10       Not Detected         Dibromochloromethane       10       Not Detected         Chlorobenzene       10       Not Detected         Ethyl Benzene       10       Not Detected	1,1-Dichloroethane	10	Not Detected
Chloroform         10         Not Detected           1,1,1-Trichloroethane         10         Not Detected           Carbon Tetrachloride         10         Not Detected           Benzene         10         Not Detected           1,2-Dichloroethane         10         Not Detected           Trichloroethene         10         Not Detected           1,2-Dichloropropane         10         Not Detected           Bromodichloromethane         10         Not Detected           trans-1,3-Dichloropropene         10         Not Detected           4-Methyl-2-pentanone         50         Not Detected           Toluene         10         Not Detected           cis-1,3-Dichloropropene         10         Not Detected           1,1,2-Trichloroethane         10         Not Detected           1,1,2-Trichloroethane         10         Not Detected           Tetrachloroethene         10         Not Detected           Dibromochloromethane         10         Not Detected           Dibromochloromethane         10         Not Detected           Chlorobenzene         10         Not Detected           Ethyl Benzene         10         Not Detected	Vinyl Acetate	50	Not Detected
1,1,1-Trichloroethane       10       Not Detected         Carbon Tetrachloride       10       Not Detected         Benzene       10       Not Detected         1,2-Dichloroethane       10       Not Detected         Trichloroethene       10       Not Detected         1,2-Dichloropropane       10       Not Detected         Bromodichloromethane       10       Not Detected         trans-1,3-Dichloropropene       10       Not Detected         4-Methyl-2-pentanone       50       Not Detected         Toluene       10       Not Detected         cis-1,3-Dichloropropene       10       Not Detected         1,1,2-Trichloroethane       10       Not Detected         Tetrachloroethane       10       Not Detected         Tetrachloroethene       10       Not Detected         Dibromochloromethane       50       Not Detected         Dibromochloromethane       10       Not Detected         Chlorobenzene       10       Not Detected         Ethyl Benzene       10       Not Detected	2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Carbon Tetrachloride         10         Not Detected           Benzene         10         Not Detected           1,2-Dichloroethane         10         Not Detected           Trichloroethene         10         Not Detected           1,2-Dichloropropane         10         Not Detected           Bromodichloromethane         10         Not Detected           trans-1,3-Dichloropropene         10         Not Detected           4-Methyl-2-pentanone         50         Not Detected           Toluene         10         Not Detected           cis-1,3-Dichloropropene         10         Not Detected           1,1,2-Trichloroethane         10         Not Detected           1,1,2-Trichloroethane         10         Not Detected           2-Hexanone         50         Not Detected           Dibromochloromethane         10         Not Detected           Chlorobenzene         10         Not Detected           Ethyl Benzene         10         Not Detected	Chloroform	10	Not Detected
Benzene10Not Detected1,2-Dichloroethane10Not DetectedTrichloroethene10Not Detected1,2-Dichloropropane10Not DetectedBromodichloromethane10Not Detectedtrans-1,3-Dichloropropene10Not Detected4-Methyl-2-pentanone50Not DetectedToluene10Not Detectedcis-1,3-Dichloropropene10Not Detected1,1,2-Trichloroethane10Not DetectedTetrachloroethene10Not Detected2-Hexanone50Not DetectedDibromochloromethane10Not DetectedChlorobenzene10Not DetectedEthyl Benzene10Not Detected	1,1,1-Trichloroethane	10	Not Detected
1,2-Dichloroethane10Not DetectedTrichloroethene10Not Detected1,2-Dichloropropane10Not DetectedBromodichloromethane10Not Detectedtrans-1,3-Dichloropropene10Not Detected4-Methyl-2-pentanone50Not DetectedToluene10Not Detectedcis-1,3-Dichloropropene10Not Detected1,1,2-Trichloroethane10Not DetectedTetrachloroethene10Not Detected2-Hexanone50Not DetectedDibromochloromethane10Not DetectedChlorobenzene10Not DetectedEthyl Benzene10Not Detected	Carbon Tetrachloride	10	Not Detected
Trichloroethene 10 Not Detected 1,2-Dichloropropane 10 Not Detected 10 Not Detected 10 Not Detected 10 Not Detected 10 Not Detected 10 Not Detected 10 Not Detected 10 Not Detected 10 Not Detected 10 Not Detected 10 Not Detected 11,1,2-Trichloropropene 10 Not Detected 11,1,2-Trichloroethane 10 Not Detected 14 Not Detected 11,1,2-Trichloroethane 10 Not Detected 11,1,2-Trichloroethane 10 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detected 11 Not Detect	Benzene	10	Not Detected
1,2-Dichloropropane10Not DetectedBromodichloromethane10Not Detectedtrans-1,3-Dichloropropene10Not Detected4-Methyl-2-pentanone50Not DetectedToluene10Not Detectedcis-1,3-Dichloropropene10Not Detected1,1,2-Trichloroethane10Not DetectedTetrachloroethene10Not Detected2-Hexanone50Not DetectedDibromochloromethane10Not DetectedChlorobenzene10Not DetectedEthyl Benzene10Not Detected	1,2-Dichloroethane	10	Not Detected
Bromodichloromethane 10 Not Detected trans-1,3-Dichloropropene 10 Not Detected 4-Methyl-2-pentanone 50 Not Detected Toluene 10 Not Detected cis-1,3-Dichloropropene 10 Not Detected 1,1,2-Trichloroethane 10 Not Detected Tetrachloroethene 10 Not Detected Tetrachloroethene 10 Not Detected Dibromochloromethane 10 Not Detected Dibromochloromethane 10 Not Detected Chlorobenzene 10 Not Detected Ethyl Benzene 10 Not Detected Not Detected Not Detected Ethyl Benzene 10 Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detect	Trichloroethene	10	Not Detected
trans-1,3-Dichloropropene 10 Not Detected 4-Methyl-2-pentanone 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected 50 Not Detected	1,2-Dichloropropane	10	Not Detected
4-Methyl-2-pentanone 50 Not Detected Not Detected Cis-1,3-Dichloropropene 10 Not Detected 1,1,2-Trichloroethane 10 Not Detected Tetrachloroethene 10 14 2-Hexanone 50 Not Detected Dibromochloromethane 10 Not Detected Chlorobenzene 10 Not Detected Not Detected Not Detected Not Detected Chlorobenzene 10 Not Detected Not Detected Ethyl Benzene 10 Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detecte	Bromodichloromethane	10	Not Detected
Toluene         10         Not Detected           cis-1,3-Dichloropropene         10         Not Detected           1,1,2-Trichloroethane         10         Not Detected           Tetrachloroethene         10         14           2-Hexanone         50         Not Detected           Dibromochloromethane         10         Not Detected           Chlorobenzene         10         Not Detected           Ethyl Benzene         10         Not Detected	trans-1,3-Dichloropropene	10	Not Detected
cis-1,3-Dichloropropene 10 Not Detected 1,1,2-Trichloroethane 10 Not Detected Tetrachloroethene 10 14 2-Hexanone 50 Not Detected Dibromochloromethane 10 Not Detected Chlorobenzene 10 Not Detected Ethyl Benzene 10 Not Detected Not Detected Not Detected Ethyl Benzene 10 Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detec	4-Methyl-2-pentanone	50	Not Detected
1,1,2-Trichloroethane10Not DetectedTetrachloroethene10142-Hexanone50Not DetectedDibromochloromethane10Not DetectedChlorobenzene10Not DetectedEthyl Benzene10Not Detected	Toluene	10	Not Detected
Tetrachloroethene 10 14 2-Hexanone 50 Not Detecte Dibromochloromethane 10 Not Detecte Chlorobenzene 10 Not Detecte Ethyl Benzene 10 Not Detecte	cis-1,3-Dichloropropene	10	Not Detected
2-Hexanone 50 Not Detected Dibromochloromethane 10 Not Detected Chlorobenzene 10 Not Detected Ethyl Benzene 10 Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detected Not Detecte	1,1,2-Trichloroethane	10	Not Detected
Dibromochloromethane 10 Not Detecte Chlorobenzene 10 Not Detecte Ethyl Benzene 10 Not Detecte	Tetrachloroethene	10	14
Chlorobenzene 10 Not Detecte Ethyl Benzene 10 Not Detecte	2-Hexanone	50	Not Detected
Ethyl Benzene 10 Not Detecte	Dibromochloromethane	10	Not Detected
Ethyl Benzene 10 Not Detecte	Chlorobenzene	10	Not Detected
·	Ethyl Benzene		Not Detected
III,p-Ayielle 10 Not Detecte	m,p-Xylene	10	Not Detected
			Not Detected
·	•		Not Detected
·	•		Not Detected
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			Not Detected
1,7 = 13.11.01.01.01.01.01.01.01.01.01.01.01.01.			Not Detected
			Not Detected
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Compound	CAS Number	Match Quality_	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	71
Nonanal	124-19-6	64 %	57

000027

SAMPLE NAME: 11205 a&b

## ID#: 9910444-03A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110613	Date of Coll	ection: 10/28/99
Dil. Factor:	1.00	Date of Ana	lysis: 11/6/99
TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	111	72-135
1,2-Dichloroethane-d4	132	69-137
Toluene-d8	111	77-124
4-Bromofluorobenzene	122	70-133

SAMPLE NAME: 11203 a&b

ID#: 9910444-04A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110614	Date of Collection: 10/28/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

Chloromethane	10	Not Detected
		1101 20100100
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	20
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	66
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

## TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Unknown	NA	NA	85
Octanal	124-13-0	64 %	86

000040

SAMPLE NAME: 11203 a&b

#### ID#: 9910444-04A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	h110614	 Date of Collection: 10/28/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
Nonanal	124-19-6	59 %	230
Decanal	112-31-2	90 %	71

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	107	72-135
1,2-Dichloroethane-d4	127	69-137
Toluene-d8	108	77-124
4-Bromofluorobenzene	118	70-133

000024

SAMPLE NAME: 11311 a&b

#### ID#: 9910471-03A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	n111106 Date of Collection: 10/29/99 5 1.00 Date of Analysis: 11/11/99
Dil. Factor:	Date of Analysis: 11/11/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	15
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

Compound	CAS Number	Match Quality	Amount (nG)
Unknown	NA	NA	96
Nonanal	124-19-6	56 %	180

SAMPLE NAME: 11311 a&b

ID#: 9910471-03A/B

### Modified VOST 5041A GC/MS Full Scan

File Name:	n111106	Date of Collection: 10/29/99
Dil. Factor:	1 00	Date of Analysis: 11/11/99
Pir. 1 400011	or the first of the property of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of	Pare Of Allandon 111 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported				
Compound	CAS Number	Match Quality	Amount (nG)	
Dodecanal	112-54-9	53 %	72	

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	102	72-135
1,2-Dichloroethane-d4	112	69-137
Toluene-d8	98	77-124
4-Bromofluorobenzene	98	70-133

SAMPLE NAME: 11212 a&b

000074

ID#: 9910444-06A/B

### Modified VOST 5041A GC/MS Full Scan

File Name: h110616 Date of Collection: 10/28/99
Dil. Factor: 1.00 Date of Analysis: 11/6/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	20
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	22
Acetone	50	140
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

Compound		CAS Number	Match Quality	Amount (nG)
Propane, 1,1,1,3,3,3-hexafluoro-		690-39-1	74 %	87
Propane, 2,2-dimethyl-	•	463-82-1	72 %	18000

SAMPLE NAME: 11212 a&b

ID#: 9910444-06A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110616	Date of Collection: 10/28/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported				
Compound	CAS Number	Match Quality	Amount (nG)	
Hexane, 2,2-dimethyl-	590-73-8	64 %	96	
Bicyclo[4.1.0]heptane, 7-methylene-	54211-14-2	53 %	74	
1,3,6-Heptatriene, 2,5,5-trimethyl-	29548-02-5	93 %	120	
1,3,7-Octatriene, 3,7-dimethyl-	502-99-8	56 %	1600	
Octanal	124-13-0	72 %	99	
Nonanal	124-19-6	72 %	270	
Hexadecanol	29354-98-1	53 %	76	
Tridecane	629-50-5	94 %	140	
Butanoic acid, 3,7-dimethyl-2,6-octadien	106-29-6	59 %	120	

Container Type: VOST Tube

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	113	72-135
1,2-Dichloroethane-d4	129	69-137
Toluene-d8	107	77-124
4-Bromofluorobenzene	116	70-133

000075

SAMPLE NAME: 11216 a&b

ID#: 9910432-04A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110606	Date of Collection: 10/27/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	23
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	19
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	18
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
Methane, dichlorodifluoro-	75-71-8	83 %	29
Unknown	NA	NA	26

SAMPLE NAME: 11216 a&b

ID#: 9910432-04A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110606	Date of Collection: 10/27/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

TENTATIVE	LY IDENTIFIED COMPOU	JNDS - Top 10 Reporte	d
Compound	CAS Number	Match Quality	Amount (nG)
Ethane, 1-chloro-1,1-difluoro-	75-68-3	43 %	290
Trisilane	7783-26-8	96 %	79
Heptanal	111-71-7	49 %	47
Octanal	124-13-0	68 %	84
Nonanal	124-19-6	72 %	200
Decanal	112-31-2	59 %	78
1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1	95 %	140

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	107	72-135
1,2-Dichloroethane-d4	122	69-137
Toluene-d8	105	77-124
4-Bromofluorobenzene	112	70-133

SAMPLE NAME: 11016 a&b

ID#: 9910332-03A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110314	Date of Collection:	10/22/99
Dil. Factor:	1.00	Date of Analysis: 1	1/3/99

	Det. Limit	Det. Limit	Amount	Amount
Compound	(nG)	(uG/m3)	(nG)	(uG/m3)
Chloromethane	10	21	Not Detected	Not Detected
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11	10	57	12	69
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	Not Detected	Not Detected
Acetone	50	120	Not Detected	Not Detected
Methylene Chloride	10	35	Not Detected	Not Detected
trans-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1,1-Dichloroethane	10	41	Not Detected	Not Detected
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	Not Detected	Not Detected
Chloroform	10	50	Not Detected	Not Detected
1,1,1-Trichloroethane	10	55	Not Detected	Not Detected
Carbon Tetrachloride	10	64	10	66
Benzene	10	32	Not Detected	Not Detected
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	Not Detected	Not Detected
1,2-Dichloropropane	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	Not Detected	Not Detected
cis-1,3-Dichloropropene	10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachioroethene	10	69	Not Detected	Not Detected
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	Not Detected	Not Detected
m,p-Xylene	10	44	Not Detected	Not Detected
o-Xylene	10	44	Not Detected	Not Detected
Styrene	10	43	Not Detected	Not Detected
Bromoform	10	100	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	10	70	Not Detected	Not Detected
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	Not Detected	Not Detected
1,2-Dichlorobenzene	10	61	Not Detected	Not Detected
cis-1,2-Dichloroethene	10	40	Not Detected	Not Detected

SAMPLE NAME: 11016 a&b

### ID#: 9910332-03A/B

Modified	VO2.1	5041A	GC/MS	Full Scan

File Name: h110314 Date of Collection: 10/22/99
Dil. Factor: 1.00 Date of Analysis: 11/3/99

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

			Amount	
Compound	CAS Number	Match Quality	(nG)	
Octane, 2,2,6-trimethyl-	62016-28-8	64 %	66	

		Method
Surrogates	% Recovery	Limits
Dibromofluoromethane	95	72-135
1,2-Dichloroethane-d4	85	69-137
Toluene-d8	101	77-124
4-Bromofluorobenzene	104	70-133

SAMPLE NAME: 11109 a&b

ID#: 9910332-04A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110315	Date of Co	ollection: 10/22/99
Dil. Factor:	1.00	Date of A	nalysis: 11/3/99

	Det. Limit	Det. Limit	Amount	Amount
Compound	(nG)	(uG/m3)	(nG)	(uG/m3)
Chloromethane	10	21	Not Detected	Not Detected
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11	10	57	17	96
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	14	44
Acetone	50	120	Not Detected	Not Detected
Methylene Chloride	10	35	Not Detected	Not Detected
trans-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1,1-Dichloroethane	10	41	Not Detected	Not Detected
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	Not Detected	Not Detected
Chloroform	10	50	Not Detected	Not Detected
1,1,1-Trichloroethane	10	55	Not Detected	Not Detected
Carbon Tetrachloride	10	64	12	77
Benzene	10	32	Not Detected	Not Detected
1.2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	Not Detected	Not Detected
1,2-Dichloropropane	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	12	44
cis-1,3-Dichloropropene	10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachloroethene	10	69	Not Detected	Not Detected
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	Not Detected	Not Detected
m,p-Xylene	10	44	Not Detected	Not Detected
o-Xylene	10	44	Not Detected	Not Detected
Styrene	10	43	Not Detected	Not Detected
Bromoform	10	100	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	10	70	Not Detected	Not Detected
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	Not Detected	Not Detected
1,2-Dichlorobenzene	10	61	Not Detected	Not Detected
cis-1,2-Dichloroethene	10	40	Not Detected	Not Detected

SAMPLE NAME: 11109 a&b

ID#: 9910332-04A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110315	Date of Collection: 10/22/99
Dil. Factor:	1.00	Date of Analysis: 11/3/99

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

			Amount
Compound	CAS Number	Match Quality	(nG)
Cyclopentanol, 2-methyl-, cis-	25144-05-2	55 %	76
Nonanal	124-19-6	78 %	160

Surrogates		Method
	% Recovery	Limits
Dibromofluoromethane	94	72-135
1,2-Dichloroethane-d4	84	69-137
Toluene-d8	103	77-124
4-Bromofluorobenzene	107	70-133

SAMPLE NAME: 11219 a&b

ID#: 9910432-06A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110608	Date of Collection: 10/27/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	24
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	Not Detected
Methylene Chloride	10	13
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	11
Benzene	10	16
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	57
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	24
o-Xylene	10	Not Detected
Styrene	10	35
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
2-Butenal, (E)-	123-73-9	64 %	49
Methane, dichlorodifluoro-	75-71-8	78 %	26

SAMPLE NAME: 11219 a&b

ID#: 9910432-06A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110608	Date of Collection: 10/27/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
Octane, 2,2,6-trimethyl-	62016-28-8	78 %	150
Nonane, 2,2,3-trimethyl-	55499-04-2	59 %	47
Decane, 2,2-dimethyl-	17302-37-3	72 %	52
Undecane, 4,6-dimethyl-	17312-82-2	72 %	55
Nonanal	124-19-6	47 %	32

Surrogates	% Recovery	Method Limits	
Dibromofluoromethane	111	72-135	
1,2-Dichloroethane-d4	129	69-137	
Toluene-d8	104	77-124	
4-Bromofluorobenzene	114	70-133	

SAMPLE NAME: 11213 a&b ID#: 9910432-07A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110609	Date of Collection: 10/27/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	14
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	27
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	30
Acetone	50	74
Methylene Chloride	10	18
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	11
Benzene	10	15
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	52
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	17
o-Xylene	10	Not Detected
Styrene	10	21
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
•	10	Not Detected
1,2-Dichlorobenzene		
cis-1,2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)
1-Propene	115-07-1	53 %	27
Methane, dichlorodifluoro-	75-71-8	83 %	56

SAMPLE NAME: 11213 a&b

ID#: 9910432-07A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110609	Date of Collection: 10/27/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported			
Compound	CAS Number	Match Quality	Amount (nG)
Octane	111-65-9	74 %	38
Hexanal	66-25-1	83 %	58
Heptanal	111-71-7	43 %	78
Heptane, 2,2,4-trimethyl-	14720-74-2	64 %	45
Octanal	124-13-0	47 %	120
Nonanal	124-19-6	72 %	680
Dodecanal	112-54-9	59 %	130
1.3-Benzodioxole, 5-(2-propenyl)-	94-59-7	93 %	140

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	109	72-135
1,2-Dichloroethane-d4	131	69-137
Toluene-d8	108	77-124
4-Bromofluorobenzene	115	70-133

SAMPLE NAME: 11011 a&b

ID#: 9910332-01A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110312		Date of Collection: 10/22/99
Dil. Factor:	1.00	• .	Date of Analysis: 11/3/99

Compared	Det. Limit	Det. Limit (uG/m3)	Amount (nG)	Amount (uG/m3)
Compound	(nG)	21	Not Detected	Not Detected
Chloromethane	10	26	Not Detected  Not Detected	Not Detected Not Detected
Vinyl Chloride	10	<del>-</del> -	Not Detected  Not Detected	
Bromomethane	10	39		Not Detected
Chloroethane	10	27 57	Not Detected	Not Detected
Freon 11	10	57	Not Detected	Not Detected
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	Not Detected	Not Detected
Acetone	50	120	Not Detected	Not Detected
Methylene Chloride	10	35	34	120
trans-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1,1-Dichloroethane	10	41	Not Detected	Not Detected
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	Not Detected	Not Detected
Chloroform	10	50	Not Detected	Not Detected
1,1,1-Trichloroethane	10	55	Not Detected	Not Detected
Carbon Tetrachloride	10	64	Not Detected	Not Detected
Benzene	10	32	Not Detected	Not Detected
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	55	Not Detected	Not Detected
1,2-Dichloropropane	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichtoropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	Not Detected	Not Detected
cis-1,3-Dichloropropene	10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachloroethene	10	69	Not Detected	Not Detected
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	Not Detected	Not Detected
m,p-Xylene	10	44	Not Detected	Not Detected
o-Xylene	10	44	Not Detected	Not Detected
Styrene	10	43	Not Detected	Not Detected
Bromoform	10	100	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	10	70	Not Detected	Not Detected
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	Not Detected	Not Detected
•		61	Not Detected	Not Detected
1,2-Dichlorobenzene cis-1,2-Dichloroethene	10 10	40	Not Detected	Not Detected

SAMPLE NAME: 11011 a&b

ID#: 9910332-01A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110312	Date of Collection: 10/22/99
Dil. Factor:	1.00	Date of Analysis: 11/3/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality (nG)

None Identified None Identified

		Method	
Surrogates	% Recovery	Limits	
Dibromofluoromethane	97	72-135	
1,2-Dichloroethane-d4	88	69-137	
Toluene-d8	101	77-124	
4-Bromofluorobenzene	105	70-133	

**SAMPLE NAME: 11012A** 

ID#: 9910301-01A

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110209	Date of Collection: 10/20/99
Dil. Factor:	1.00	Date of Analysis: 11/2/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	140
Vinyl Chloride	10	Not Detected
Bromomethane	10	13
Chloroethane	10	Not Detected
Freon 11	10	Not Detected
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Díchloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetfachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified

**SAMPLE NAME: 11012A** 

ID#: 9910301-01A

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110209	Date of Collection: 10/20/99
Dil. Factor:	1.00	Date of Analysis: 11/2/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	97	72-135
1,2-Dichloroethane-d4	86	69-137
Toluene-d8	98	77-124
4-Bromofluorobenzene	103	70-133

**SAMPLE NAME: 11012B** 

ID#: 9910301-01B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110210	Date of Collection: 10/20/99
Dil. Factor:	1.00	Date of Analysis: 11/2/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	20
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	Not Detected
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

None Identified

**SAMPLE NAME: 11012B** 

ID#: 9910301-01B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110210	Date of Coll	ection: 10/20/99
Dil. Factor:	1.00	Date of Ana	lysis: 11/2/99
	TENTATIVELY IDENTIFIED COMPC	UNDS - Top 10 Reported	1
Compound	CAS Number	Match Quality	Amount (nG)

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	96	72-135
1,2-Dichloroethane-d4	87	69-137
Toluene-d8	104	77-124
4-Bromofluorobenzene	116	70-133

SAMPLE NAME: 11025 a&b

ID#: 9910316-01A/B

#### Modified VOST 5041A GC/MS Full Scan

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I File Name: Math. Alexandre Nobel Solution h110211 2 10, 70, 70, 70, 70, 70, 70, 70, 70, 70, 7	Date of Collection: 10/21/99
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	Det. Limit	Det. Limit	Amount	Amount
Compound	(nG)	(uG/m3)	(nG)	(uG/m3)
Chloromethane	10	21	Not Detected	Not Detected
Vinyl Chloride	10	26	Not Detected	Not Detected
Bromomethane	10	39	Not Detected	Not Detected
Chloroethane	10	27	Not Detected	Not Detected
Freon 11	10	57	Not Detected	Not Detected
1,1-Dichloroethene	10	40	Not Detected	Not Detected
Carbon Disulfide	10	32	Not Detected	Not Detected
Acetone	50	120	Not Detected	Not Detected
Methylene Chloride	10	35	Not Detected	Not Detected
trans-1,2-Dichloroethene	10	40	Not Detected	Not Detected
1,1-Dichloroethane	10	41	Not Detected	Not Detected
Vinyl Acetate	50	180	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	150	Not Detected	Not Detected
Chloroform	10	50	Not Detected	Not Detected
1,1,1-Trichloroethane	10	55	Not Detected	Not Detected
Carbon Tetrachloride	10	64	Not Detected	Not Detected
Benzene	10	32	Not Detected	Not Detected
1,2-Dichloroethane	10	41	Not Detected	Not Detected
Trichloroethene	10	<b>5</b> 5	Not Detected	Not Detected
1,2-Dichloropropane	10	47	Not Detected	Not Detected
Bromodichloromethane	10	68	Not Detected	Not Detected
trans-1,3-Dichloropropene	10	46	Not Detected	Not Detected
4-Methyl-2-pentanone	50	210	Not Detected	Not Detected
Toluene	10	38	Not Detected	Not Detected
cis-1,3-Díchloropropene	10	46	Not Detected	Not Detected
1,1,2-Trichloroethane	10	55	Not Detected	Not Detected
Tetrachloroethene	10	69	Not Detected	Not Detected
2-Hexanone	50	210	Not Detected	Not Detected
Dibromochloromethane	10	86	Not Detected	Not Detected
Chlorobenzene	10	47	Not Detected	Not Detected
Ethyl Benzene	10	44	Not Detected	Not Detected
m,p-Xylene	10	44	Not Detected	Not Detected
o-Xylene	10	44	Not Detected	Not Detected
Styrene	10	43	Not Detected	Not Detected
Bromoform	10	100	Not Detected	Not Detected
1,1,2,2-Tetrachloroethane	10	70	Not Detected	Not Detected
1,3-Dichlorobenzene	10	61	Not Detected	Not Detected
1,4-Dichlorobenzene	10	61	Not Detected	Not Detected
1,2-Dichlorobenzene	10	61	Not Detected	Not Detected
cis-1,2-Dichloroethene	10	40	Not Detected	Not Detected

SAMPLE NAME: 11025 a&b

ID#: 9910316-01A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	A 4 6 6 6 6 110211 200 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Date of Collection: 10/21/99
		Date of Collection: 10/21/99  Date of Analysis: 11/2/99
Dil. Factor:		Date of Analysis: 11/2/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Amount

Compound CAS Number Match Quality (nG)

None Identified None Identified

		Method
Surrogates	% Recovery	Limits
Dibromofluoromethane	92	72-135
1,2-Dichloroethane-d4	84	69-137
Toluene-d8	107	77-124
4-Bromofluorobenzene	121	70-133

SAMPLE NAME: 11101 a&b

ID#: 9910376-01A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name: £ 10405 £ Date of Collection: 10/25/99 £ Dil. Factor: £ 1.00 £ Date of Analysis: 11/4/99 £
-------------------------------------------------------------------------------------------------------

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	Not Detected
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)

None Identified

SAMPLE NAME: 11101 a&b

ID#: 9910376-01A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110405 Date of Collection: 10/25/99
Dil. Factor:	h110405

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

Surrogates	% Recovery	Method Limits	
Dibromofluoromethane	90	72-135	
1,2-Dichloroethane-d4	74	69-137	
Toluene-d8	111	77-124	
4-Bromofluorobenzene	113	70-133	

SAMPLE NAME: 11204 a&b

#### ID#: 9910396-01A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	ก110509	Date of Collection: 10/25/99
Dil. Factor:	1.00	Date of Analysis: 11/5/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	Not Detected
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	Not Detected
Methylene Chloride	10	11
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

000006

SAMPLE NAME: 11204 a&b

ID#: 9910396-01A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	n110509	Date of Collection: 10/25/99
Dil. Factor:	1.00	Date of Analysis: 11/5/99
TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported		
Compound	CAS Number	Match Quality Amount (nG)

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	101	72-135
1,2-Dichloroethane-d4	102	69-137
Toluene-d8	102	77-124
4-Bromofluorobenzene	<b>9</b> 9	70-133

SAMPLE NAME: 11208 a&b

#### ID#: 9910444-01A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110905	Date of Collection: 10/28/99
Dil. Factor:	1.00	Date of Analysis: 11/9/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	Not Detected
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

SAMPLE NAME: 11208 a&b

ID#: 9910444-01A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name: h110905 Date of Collection: 10/28/99
Dil. Factor: 1.00 Date of Analysis: 11/9/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

Surrogates	% Recovery	Method Limits
Dibromofluoromethane	113	72-135
1,2-Dichloroethane-d4	128	69-137
Toluene-d8	105	77-124
4-Bromofluorobenzene	126	70-133

#### SAMPLE NAME: 11221 a&b

#### ID#: 9910432-01A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110605	Date of Collection: 10/27/99
Dil. Factor:	1.00	Date of Analysis: 11/6/99

Compound	Det. Limit (nG)	Amount (nG)
Chloromethane	10	Not Detected
Vinyl Chloride	10	Not Detected
Bromomethane	10	Not Detected
Chloroethane	10	Not Detected
Freon 11	10	Not Detected
1,1-Dichloroethene	10	Not Detected
Carbon Disulfide	10	Not Detected
Acetone	50	Not Detected
Methylene Chloride	10	Not Detected
trans-1,2-Dichloroethene	10	Not Detected
1,1-Dichloroethane	10	Not Detected
Vinyl Acetate	50	Not Detected
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected
Chloroform	10	Not Detected
1,1,1-Trichloroethane	10	Not Detected
Carbon Tetrachloride	10	Not Detected
Benzene	10	Not Detected
1,2-Dichloroethane	10	Not Detected
Trichloroethene	10	Not Detected
1,2-Dichloropropane	10	Not Detected
Bromodichloromethane	10	Not Detected
trans-1,3-Dichloropropene	10	Not Detected
4-Methyl-2-pentanone	50	Not Detected
Toluene	10	Not Detected
cis-1,3-Dichloropropene	10	Not Detected
1,1,2-Trichloroethane	10	Not Detected
Tetrachloroethene	10	Not Detected
2-Hexanone	50	Not Detected
Dibromochloromethane	10	Not Detected
Chlorobenzene	10	Not Detected
Ethyl Benzene	10	Not Detected
m,p-Xylene	10	Not Detected
o-Xylene	10	Not Detected
Styrene	10	Not Detected
Bromoform	10	Not Detected
1,1,2,2-Tetrachloroethane	10	Not Detected
1,3-Dichlorobenzene	10	Not Detected
1,4-Dichlorobenzene	10	Not Detected
1,2-Dichlorobenzene	10	Not Detected
cis-1,2-Dichloroethene	10	Not Detected

#### TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound	CAS Number	Match Quality	Amount (nG)

SAMPLE NAME: 11221 a&b

ID#: 9910432-01A/B

#### Modified VOST 5041A GC/MS Full Scan

 File Name:
 h110605
 Date of Collection: 10/27/99

 Dil. Factor:
 1.00
 Date of Analysis: 11/6/99

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported

Compound CAS Number Match Quality Amount (nG)

Surrogates	% Recovery	Method Limits			
Dibromofluoromethane	107	72-135			
1,2-Dichloroethane-d4	124	69-137			
Toluene-d8	107	77-124			
4-Bromofluorobenzene	119	70-133			

SAMPLE NAME: 11316 a&b

000005

ID#: 9910471-01A/B

#### Modified VOST 5041A GC/MS Full Scan

File Name:	h110908 Date of Collection: 10/29/99
Dil. Factor:	1.00 Date of Analysis: 11/9/99

Compound	Det. Limit (nG)	Amount (nG)			
Chloromethane	10	Not Detected			
Vinyl Chloride	10	Not Detected			
Bromomethane	10	Not Detected			
Chloroethane	10	Not Detected			
Freon 11 .	10	Not Detected			
1,1-Dichloroethene	10	Not Detected			
Carbon Disulfide	10	Not Detected			
Acetone	50	Not Detected			
Methylene Chloride	10	Not Detected			
trans-1,2-Dichloroethene	10	Not Detected			
1,1-Dichloroethane	10	Not Detected			
Vinyl Acetate	50	Not Detected			
2-Butanone (Methyl Ethyl Ketone)	50	Not Detected			
Chloroform	10	Not Detected			
1,1,1-Trichloroethane	10	Not Detected			
Carbon Tetrachloride	10	Not Detected			
Benzene	10	Not Detected			
1,2-Dichloroethane	10	Not Detected			
Trichloroethene	10	Not Detected			
1,2-Dichloropropane	10	Not Detected			
Bromodichloromethane	10	Not Detected			
trans-1,3-Dichloropropene	10	Not Detected			
4-Methyl-2-pentanone	50	Not Detected			
Toluene	10	Not Detected			
cis-1,3-Dichloropropene	10	Not Detected			
1,1,2-Trichloroethane	10	Not Detected			
Tetrachloroethene	10	Not Detected			
2-Hexanone	50	Not Detected			
Dibromochloromethane	10	Not Detected			
Chlorobenzene	10	Not Detected			
Ethyl Benzene	10	Not Detected			
m,p-Xylene	10	Not Detected			
o-Xylene	10	Not Detected			
Styrene	10	Not Detected			
Bromoform	10	Not Detected			
1,1,2,2-Tetrachloroethane	10	Not Detected			
1,3-Dichlorobenzene	10	Not Detected			
1,4-Dichlorobenzene	10	Not Detected			
1,2-Dichlorobenzene	10	Not Detected			
cis-1,2-Dichloroethene	10	Not Detected			

TENTATIVELY IDENTIFIED COMPOUNDS - Top 10 Reported					
Compound	C	AS Number	Match Quality	Amount (nG)	





### INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Frank O'Bannon Governor

Lori F. Kaplan Commissioner 100 North Senate Avenue P.O. Box 6015 Indianapolis, Indiana 46206-6015 (317) 232-8603 (800) 451-6027 www.state.in.us/idem

December 1, 2000

Janie Carrig
USACE Omaha District
CENQO-ED-GC
215 N. 17<sup>th</sup> St.
Omaha. NE 68106

Dear Ms. Carrig:

Re: Validated Data for Himco Dump Superfund Site, Elkhart, IN

Enclosed please find the validated results for the Himco dump inorganic data set per your request. If you have any questions regarding the data or the validation, please feel free to call me at (317) 233-2823.

Sincerely,

Jessica R. Huxhold, Project Manager

Federal Programs Section Office of Land Quality

JRH:jrh Enclosures

cc: Rex Osborn, IDEM (w/o enclosures)

#### DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

#### INDIANAPOLIS

#### OFFICE MEMORANDUM

Date: November 17, 2000

To:

Jessica Huxhold

Federal Programs Section

Thru: Fran Metcalfe Steve Buckel

From:

Sandra Roberts

OLQ Chemistry Section

Subject: Analytical Results for Himco Dump

Elkhart County, Elkhart, Indiana

Site # 7500044

Sampled: March 15 and 16, 2000, April 17, 18, 19, 25, 26, 27, and 28, 2000

and May 1,2, and 3, 2000

Tested by Region 5 Central Regional Laboratories in Chicago, Illinois

The analytical data and results from "Data Submittal for the March/April 2000 Groundwater Sampling Event for Himco Dump have been validated according to the quality criteria contained in Test Methods for Evaluated Solid Waste, Physical/Chemical Methods, SW-846, Third Edition, Final Updates 1, 2, 2a, and 3, and EPA Drinking Water Standards, 1996. Based on the evaluation, it has been determined that the results are acceptable for use. Reasons that data are qualified as estimated or unusable are explained below. This memorandum should remain attached to the original laboratory reports for reference.

#### General Comments:

The purpose of this event was to sample in the groundwater at the Himco Dump. The collected samples were analyzed for total metals, and the general chemistry parameters, sulfate and bromide. Sample set 2000SY03S01 thru S11 was tested for general chemistry parameters only. Sample set 2000SY01S01 thru S14 was tested for total metals only. Samples set 20000SY04S14 thru S39, 20000SY04S40 thru S58, and 2000SY04S01 thru S13 were tested for total metals and general chemistry parameters.

#### Sampling Quality Assurance/Quality Control:

Field documentation included only the chain-of-custody with the field locations in terms of monitoring well identifications and residential water well addresses. Therefore, no site

Jessica Huxhold-Himco Dump (Superfund) - November 17, 2000 Page 2 of 5

interpretation or evaluation can be made.

Field duplicate samples are used to establish the representativeness of field sampling (i.e., the homogeneity and sample variability). For sample set 20000SY04S14 thru S39, no interpretation could be made since no field information was provided with the data. For sample set 20000SY01S01 thru S14, the groundwater duplicate sample results are considered in good agreement. In sample set 20000SY04S40 thru S58, the groundwater results for barium, calcium, iron, magnesium, manganese, potassium, sodium, and sulfate are considered estimated due to poor agreement in sample duplicate results of WT116A and WT114A. For sample set 2000SY04S01 thru S13, the groundwater duplicate sample results for potassium and zinc in groundwater are considered estimated due to poor agreement. No field duplicate samples were collected for the 2000SY03S01 through S11 sample set for bromide and sulfate of the 3/15/00 and 3/16/00 sampling events and therefore, the results are considered estimated. Since the samples were not tested for total suspended solids, no interpretation can be made regarding possible contributions to the poor duplication in the above water samples. Also, no field sampling information further complicates the interpretation process.

Field blanks (trip and/or equipment) are used to identify sample contamination resulting from sampling equipment, sample containers, chemical preservatives, and the handling and transportation of samples. No trip blanks are required since no volatile organic constituents were on the parameter list. No equipment blank results were reported. Note that the Himco Supplemental Ground Water Investigation Field Sampling Plan (FSP) indicates that quality control samples will include an equipment blank and the equipment blank will be collected after the last monitoring well has been sampled. If nondedicated equipment that is listed in the Himco FSP was used to collect the samples, the results will possibly reflect cross-contamination and biased high results.

#### Laboratory Ouality Assurance/Quality Control:

The laboratory performed all quality assurance/quality control (QA/QC) measures necessary to validate the analytical results for this sampling event. According to the Himco Supplemental Ground Water Investigation Field Sampling Plan/Quality Assurance Project Plan, the SW-846 methods were referenced for sample analysis. Based on the SW-846 quality assurance/control criteria, the data is considered acceptable for use.

Based on the validation of the analytical results, the following specific comments and/or qualifications made regarding the data:

#### Metals Analysis

Groundwater samples were tested for metals by EPA Methods 200.7, and 245.2, and GFAA (Graphite Furnace Atomic Absorption) Method. The following inadequacies/irregularities were found for all the metals testing by ICP. The possible matrix effects could not be determined, since the laboratory intermingled SW-846 and Contract Laboratory Program (CLP) methods by performing lab duplicate samples instead of testing matrix spike duplicate sample data. Also, initial calibration verification and continuing calibration verification were labeled audit check

Jessica Huxhold-Himco Dump (Superfund) - November 17, 2000 Page 3 of 5

results. Note that whenever audit samples were outside of the CLP criteria of 90-110% recovery for the metals, first sample run result by the SW-846 method was reported.

The mercury results for 2000SY04S40 through S58 are considered estimated since the holding time of 28 days was exceeded.

The chromium and zinc results for 2000SY04S40 through S58 are considered estimated and biased slightly high due to continuing calibration verification (CCV) recovery of 110.64% for chromium and CCV recoveries of 113.22% and 111.19% for zinc.

The selenium results for 2000SY04S54 are considered estimated and biased slightly high due to CCV recovery of 112%.

The mercury results for 2000SY04S01 through S13 are considered estimated and biased slightly high due to high matrix spike (MS) recovery of 127.2% and high laboratory control sample (LCS) result of 124.3%.

The cobalt results for 2000SY04S01 through S13 are considered estimated and biased slightly high due to initial calibration verification (ICV) recovery of 110.99% and continuing calibration verification (CCV) recovery of 110.52%.

The iron results for 2000SY04S01 through S13 are considered estimated and biased slightly high due to CCV recovery of 110.94%.

The sodium results for 2000SY04S01 through S13 are considered estimated and biased low due low matrix spike (MS) recovery of 60.77%.

The calcium results for 2000SY01S01 through S14 and 2000SY01R12 are considered estimated and biased high due to contamination in the preparation blank at 158 ppb.

The chromium and cobalt results for 2000SY01S01 through S14 and 2000SY01R12 are considered estimated and biased high due to high CCV recoveries of 112.35%, 112.96%, and 112.96% chromium and CCV recovery of 115.4% for cobalt.

The chromium and cobalt results for 2000SY04S31 through S39 are considered estimated and slightly biased high due to CCV recovery of 112.63% for chromium and CCV recovery of 110.74% for cobalt.

The iron results for 2000SY04S14 through S39 are considered estimated due to contamination in the preparation blank of 42.2 ppb, which is approaching the reporting limit of 46.5 ppb.

The magnesium results for 20000SY04S31 through S39 are considered estimated and biased high due to CCV recovery of 111.44%.

Jessica Huxhold-Himco Dump (Superfund) - November 17, 2000 Page 4 of 5

The nickel results for 2000SY04S14 through S39 are considered estimated and slightly biased high due to ICV recovery of 111.68% and CCV recoveries of 111.15%, 110.76%, and 114.01%.

#### General Chemistry

Groundwater samples were tested for sulfate and bromide by EPA Method 300.0. The possible matrix effects could not be determined, since the laboratory intermingled SW-846 and CLP methods by testing duplicate samples instead of testing matrix spike duplicate sample data.

The sulfate results for 2000SY03S01 through S11 are considered estimated due to low level contamination in the initial calibration blank samples of 3.67 ppm and 3.51 ppm.

The sulfate results for 2000SY04S14 through S39 are considered estimated and biased low due to low laboratory fortified blank recovery of 66.5%.

The sulfate results for 20000SY04S44, S0000SY04S49, and S0000SY04S58 are considered estimated due to low calibration coefficient of 0.992.

#### Results:

Multiple samples showed exceedences for Drinking Water Standard Secondary Maximum Contaminant Levels (SMCLs), Maximum Contaminant Levels (MCLs) and action levels.

The background well is WT102A and upgradient well is WT112A. Both wells showed SMCL exceedences in manganese. The background well also showed SMCL exceedence in sulfate. See attached charts for results and other SMCL exceedences. The total chromium concentration exceeded the MCL of 100 ppb with GPE-2 at 154 ppb, GP114-3 at 173 ppb, and GP16-2 at 124 ppb. The total arsenic concentration exceeded the MCL of 50 ppb with GP16-2 at 74 ppb. The total lead concentration exceeded the MCL of GPE-2 at 27 ppb, GP114-3 at 35 ppb, GP16-2 at 47, 15 ppb with GPE-1 at 15 ppb, and GP101-1 at 27 ppb.

All charts list the data in terms of reporting limits, instead of method detection limits that a few of the laboratory reports indicated. Plume delineation could not be determined since twenty additional wells and twelve residential sampling locations/descriptions were included in the data package than are shown in the field sampling plan and maps.

Note that sample set 2000SY04S01 thru S13 round was duplicated in sample set 2000SY01S01 tirru S14. The reasons for this duplication is unknown.

#### Conclusion

For overall project goal, the data are acceptable for use. Quarterly sampling and any ongoing

Jessica Huxhold-Himco Dump (Superfund) - November 17, 2000 Page 5 of 5

remediation should continue to document the MCL, SMCL, and action levels exceedences. Also, field sheets and a revised sampling location map should be submitted with future results and the SW-846 methods and criteria listed in the Himco Supplemental Ground Water Investigation Field Sampling Plan/Quality Assurance Project Plan should be followed in the future.

Attachments

#### OLQ CHEMISTRY - REFER TO ATTACHED MEMO

# **General Chemical Analysis**

Site Name:

Himco Dump

Water

Site Number:

7500044

Location:

Elkhart County, Elkhart, Indiana

Date Sampled:

3/15/00 and 3/16/00

Date Reported:

4/19/00

Lab:

Region 5 Central Regional Laboratories

UNITS:

mg/L

Sample #	Type/ID#	Sulfate	Bromide			
Lab						
	Reporting Limit	0.75	0.5			
Actio	n Level >	250 (SMCL)	N/A			
2000SY03S01	27919/EDCK4	132 1447	医自动性多性性 医神经炎			
2000SY03S02	27948/EDCK2	784 AN 146 MARKET	在於極端的學樣機能			
2000SY03S03	B-3	33 126 35 5	今,新6个点情 <b>以</b>			
2000SY03S04	54271/EDCK0	75 No 138 A 2007				
2000SY03S05	J-1	114 de 114 de 9 cu	a haraka salikatika			
2000SY03S06	E-3	126	orași în literația i			
2000SY03S07	B-1					
2000SY03S08	B-4	46.1				
2000SY03S09	EDCK1/54253	154				
2000SY03S10	54280/EDCK3	85-77-133 Add 44.	Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para di Para d			
2000SY03S11	54305/EDCJ7	1961年171章				

\* BLANK (Type indicated)

Empty Box indicates NON-DETECTABLE

\*\* FIELD DUPLICATE

NR = NOT RUN

NA=NOT AVAILABLE

Estimated Bold = above action level

SMCL = Secondary Maximum Contamination Limit

### **Total Metals**

pg 1 Water

te Name:

Himco Dump

te Number: >cation:

7500044

7300044

Elkhart County, Elkhart, Indiana

ite Sampled:

3/15/00 and 3/16/00

ate Reported:

ıb:

4/19/00

Region 5 Central Regional Laboratories

UNITS: ug/L

Sample #	Type/ID#	AI I	Ba	Be	Ca	Cr	Co	Cu	Fe	Mg	Mn	Ni	K	Ag
Lab	Reporting Limit	100	5	5	100	30	30	30	100	100	15	50	300	30
MCLs an	d Action Levels >	50-200(SMCL)	2000	4	N/A	100	N/A	1300	300(SMCL)	N/A	50(SMCL)	N/A	N/A	100(SMCL)
					<u> </u>				<u> </u>					
2000SY01S01	B-1		118		57,200				509	22,000	40.4		2,080	
2000SY01S02	B-3		61.8		87,600				418	27,200	299		1,240	
2000SY01S03	54253 Westwood		128		91,500	1.4			1,670	26,500	213		1,330	1
2000SY01S04	54271 Westwood		50.4		101,000	- 13			104	21,700	359		1,790	
2000SY01S05	54215 Westwood		32.8		91,800	And Depart	, 414 °, 1			19,800			4,650	
2000SY01S06	27964 Westwood		113		113,000	₹ <sup>1</sup> <b>4</b> 55,900	10 25		5,860	16,100	73		2,610	
2000SY01S07	27948 Westwood		102		122,000		200		6,120	16,000	72.3		2,870	
2000SY01S08	27919 Westwood		28.1		103,000	W. S. C.				19,000	146		3,660	
2000SY01S09	54280 Westwood		72.8		105,000					20,200	355		2,580	
2000SY01S10	54231 Westwood		43.5		115,000	7				20,800			4,300	
2000SY01S11	54305 Westwood		60.4		177,000	14 W.	. 1. 5 14.		2,170	18,200	1,560		5,270	
000SY01S12**	54287 Westwood**		63.8		93,300	4.34.05	35.		5,050	21,500	63.1		1,150	
000SY01R12**	54287 Westwood**		64.5		92,300	\$55. Act o	1847.463		5,030	22,000	59.6		1,160	
2000SY01S13	54125 Westwood		108		100,000	31900, 327	1986 34 P		885	21,500	284		1,790	
2000SY01S14	E-3 (E3)	133	38.8		73,400	医点流体	19.00		2,500	29,200	39		1,700	
		-												

3LANK (Type indicated)

Empty Box indicates NON-DETECTABLE

FIELD DUPLICATE

NR = NOT RUN

NA=NOT AVAILABLE

Estimated Bold = above action level

ACL = Secondary Maximum Contamination Limit

# OLQ CHEMISTRY - REFER TO ATTACHED MEMO

# **Total Metals**

pg 2 water

te Name: te Number: Himco Dump

7500044

Elkhart County, Elkhart, Indiana

ate Sampled:

ocation:

3/15/00 and 3/16/00

ate Reported:

4/19/00

ate reported.

Region 5 Central Regional Laboratories

UNITS: ug/L

Sample #	Type/ID#	Na	V	Zn	Hg	Sb	As	Cd	Pb	Se	TI
Lab	Reporting Limit	200	20	50	0.2	7	7	0.3	7	7	3
MCLs and	Action Levels >	N/A	N/A	5,000(SMCL)	2	6	50	5	15	50	2
2000SY01S01	B-1	50,700	<del></del>	+							<u> </u>
000SY01S02	B-3	19,700					<del> </del>				
000SY01S03	54253 Westwood	14,500				<del> </del>	<del> </del>				<del>                                     </del>
000SY01S04	54271 Westwood	22,600									
000SY01S05	54215 Westwood	126,000		96.5							
000SY01S06	27964 Westwood	13,500	-			<u> </u>					
000SY01S07	27948 Westwood	33,200									
000SY01S08	27919 Westwood	56,700									
000SY01S09	54280 Westwood	65,400									
000SY01S10	54231 Westwood	82,500		160							
000SY01S11	54305 Westwood	44,400									
00SY01S12**	54287 Westwood**	14,900			***************************************						
00SY01R12**	54287 Westwood**	14,700			·				<del></del>		
000SY01S13	54125 Westwood	17,600									
000SY01S14	E-3 (E3)	11,900					8				
t }LANK (Type indica	ited)	Empty Box	indicates	L L NON-DETECTAR	BI F		(Estimated)				

BLANK (Type indicated)
FIELD DUPLICATE

Empty Box indicates NON-DETECTABLE

NR = NOT RUN

NA=NOT AVAILABLE

(Estimated)

Bold = above action level

ACL = Secondary Maximum Contamination Limit

# **Total Metals**

pg 1 Water

e Name:

Himco Dump

e Number:

7500044

cation:

Elkhart County, Elkhart, Indiana

te Sampled:

4/17/00 and 4/18/00

te Reported:

b:

6/12/00

Region 5 Central Regional Laboratories

UNITS: ug/L

Sample #	Type/ID#	Al	Ва	Be	Ca	Cr	Co	Cu	Fe	Mg	Mn	Ni	K	Ag
Lab	Reporting Limit	118	2.6	2	148	6.7	13.2	9.3	46.5	11	1.9	21	217	11.1
MCLs and	Action Levels >	50-200(SMCL)	2000	4	N/A	100	N/A	1300	300(SMCL)	N/A	50(SMCL)	N/A	N/A	100(SMCL)
									<u> </u>					
2000CY04S01	54287 Westwood		66.6		88,100			31.3	5,780	20,600	58.7		1,100	
2000SY04S02	54280 Westwood		70.4		102,000		*	11.4	5 2	20,000	325		2,430	
2000SY04S03	54271 Westwood		57.6		110,000		1000	14.7	86	24,000	380		1,880	
2000SY04S04	54253 Westwood		131		90,000		ार र अपूर	34.8	1,710	27,600	223		1,280	
2000SY04S05	54231 Westwood		43.9		106,000				1 L 45 (15 s)	21,600			3,850	
2000SY04S06	54215 Westwood		29.1		83,000			13.3	1. P. Wa	19,400			4,000	
2000SY04S07	54125 Westwood		109		99,000		14.00		1,130	21,500	299		1,760	
2000SY04S08	27919 Westwood		39.3		132,000			13.3	2 - 100	24,900	202		4,140	
2000SY04S09	27883 Westwood		35.8		99,800			10.7	1 87 79 37	21,500	30		3,700	
000SY04S10**	54305 Westwood**	••	76.6**	•••	205,000**	**	**	15.2**	2,790**	21,700**	1,880**	**	6,920**	4,0
000SY04S11**	54305 Westwood**	**	63.2**	**	173,000**	**	**	10.7**	2,270**	18,200**	1,560**	**	5,170**	4.0
2000SY04S12	27964 Westwood		106		112,000		11 11 21		5,870	15,700	72		-2,340	
2000SY04S13	27948 Westwood		92.3		97,500		<b>可能性以第一</b>	62.1	5,530	13,600	65.2		2,590	
LANK (Tupe indical	<u> </u>	Emply Boy indica		FTCOTAL	<u> </u>		155 a Second						<u> </u>	

LANK (Type indicated)
FIELD DUPLICATE

Empty Box indicates NON-DETECTABLE

NR = NOT RUN

NA≈NOT AVAILABLE

Estimated

Bold = above action level

1CL = Secondary Contamination Limit

# OLQ CHEMISTRY - REFER TO ATTACHED MEMO

# **Total Metals**

pg 2

ite Name:

Himco Dump

water

ite Number:

7500044

ocation:

Elkhart County, Elkhart, Indiana

ate Sampled: ate Reported:

4/17/00 through 4/19/00 5/15/00, 5/18/00, 6/12/00

ab:

Region 5 Central Regional Laboratories

UNITS: ug/L

Sample #	Type/ID#	Na	V	Zn	Hg	Sb	As	Cd	Pb	Se	TI
Lab	Reporting Limit	37.5	5.1	34.1	0.2	7	7	0.3	7	7	4
MCLs and	Action Levels >	N/A	N/A	5000(SMCL)	2	6	50	5	15	50	2
2000SY04S01	54287 Westwood	15,400		ार सम्बद्धाः । इतिहास			7				
2000SY04S02	54280 Westwood	63,200			Att hijt in releas						
2000SY04S03	54271 Westwood	30,300		and the state of	સ્થિકાં કરા						
2000SY04S04	54253 Westwood	15,200									
2000SY04S05	54231 Westwood	584,700		173							
2000SY04S06	54215 Westwood	116,000		128							
2000SY04S07	54125 Westwood	£19,000 £			148-456						
2000SY04S08	27919 Westwood	81,000									
2000SY04S09	27883 Westwood	91,800		87.3	498, F1.	<del></del>					
000SY04S10**	54305 Westwood**	92,200**	**	39.15	- 1 front 1 gr	**	**	**	**	**	**
000SY04S11**	54305 Westwood**	73,400**	**		19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	**	**	**	**	**	**
2000SY04S12	27964 Westwood	14,800		12.00	STORY OF THE		7				
2000SY04S13	27948 Westwood	-35,100 <i>3</i>		31,188			8				
31 ANK (Type indical	<u> </u>	<u> </u>		NON PETEOTA			· ( · · · · · · · · · · · · · · · ·				

3LANK (Type indicated) FIELD DUPLICATE

Empty Box indicates NON-DETECTABLE

NR = NOT RUN

NA=NOT AVAILABLE

Estimated

Bold = above action level

MCL = Secondary Contamination Limit

# **General Chemical Analysis**

Water

ite Name:

Himco Dump

ite Number:

7500044

ocation:

Elkhart County, Elkhart, Indiana

ate Sampled:

4/17/00 and 4/18/00

ate Reported:

5/4/000

ab:

Region 5 Central Regional Laboratories

UNITS:

mg/L

Sample #	Type/ID#	Sulfate	Bromide
Lab			
	Reporting Limit	0.75	0.5
Acti	on Level >	250 (SMCL)	N/A
2000SY04S01	54287 Westwood	142	
2000SY04S02	54280 Westwood	130	
2000SY04S03	54271 Westwood	130	
2000SY04S04	54253 Westwood	153	
2000SY04S05	54231 Westwood	134	
2000SY04S06	54215 Westwood	127	
2000SY04S07	54125 Westwood	132	
2000SY04S08	27919 Westwood	109	
2000SY04S09	27883 Westwood	105	
000SY04S10**	54305 Westwood**	152**	**
000SY04S11**	54305 Westwood**	152**	**
2000SY04S12	27964 Westwood	148	
2000SY04S13	27948 Westwood	142	

BLANK (Type indicated) FIELD DUPLICATE

Empty Box indicates NON-DETECTABLE

NR = NOT RUN

NA=NOT AVAILABLE

Estimated

Bold = above action level

MCL = Secondary Maximum Contamination Limit

## OLQ CHEMISTRY - REFER TO ATTACHED MEMO

# **Total Metals**

pg 1 Water

) Name:

Himco Dump

3 Number:

7500044

:ation:

Elkhart County, Elkhart, Indiana

e Sampled:

4/25/00 through 4/27/00

e Reported:

6/12/00

Region 5 Central Regional Laboratories

UNITS: ug/L

Sample #	Type/ID#	Al	Ва	Ве	Ca	Cr	Со	Cu	Fe	Mg	Mn	Ni	К	Ag
Lab	Reporting Limit	118	3	2	50	6.7	30	9.3	46.5	11	1.9	21	217	11.1
MCLs a	ind Action Levels >	50-200(SMCL)	2000	4	N/A	100	N/A	1300	300(SMCL)	N/A	50(SMCL)	N/A	N/A	100(SMCL)
0000SY04S14	GPE-1	2,640	99		351,000	46.7		23.5	19,100	47,000	751	26.2	8,490	
0000SY04S15	GPE-2	3,960	170		471,000	154		55.1	38,400	58,800	957	38.2	12,500	
000SY04S16	GPE-3	3,190	120		211,000	90.3		27.9	17,800	31,100	490	22.4::	9,000	
0000SY04S17	WT102				648				भ (अरक्षेत्रपृष्टा	197 a		Set (0), 80		
000SY04S18	WT102C	500			129,000	26.8			2,210	₹45,600 -	288	₫23.7⊘.	1,970	
0000SY04S19	WT102B				75,800	24.2			1,580	22,300	91.9	કું કર્માં ક્ષેત્રિક જ	1,840	
)000SY04S20	WT102A				173,000	17.8			115	18,800	86.7	45.4	2,060	
)000SY04S21	GP114-1		80.6		179,000				FC. ( 337 € gr	23,200	500	工资 成乳产业	3,020	
000SY04S22	GP114-2	1,180	48.4		245,000	19.1		11.5	13,400	34,500	309	5. 38. 3	2,760	
000SY04S23	GP114-3	6,420	95.6		315,000	173	14.9	76.3	56,300	57,300	881	57.8	4,650	
000SY04S24	GP16-1	2,160	45.7		176,000	38.1		18.4	12,800	34,100	563	5 60,000	3,060	
)000SY04S25	GP16-2	11,900	164		505,000	124	20.8	105	71,400	116,000	182	64.6	4,330	
)000SY04S26	GP101-1	3,410	118		281,000	64.4	1	31.1	28,400	42,600	634	29.9	6,080	
000SY04S27	GP101-2	455	128		210,000	12.6			12,000	33,800	356		6,190	
)000SY04S28	WT113B		68.4		101,000				1,210	,21,400	97.6	28 6 6 6	2,040	
)000SY04S29	WT113A		13.8		64,300				59.8	16,500	3.1		1,210	
)000SY04S30	WTB1		122		52,500	·			. 527	20,900	40.1		2,100	
0000SY04S31	WTB3		60.2		96,800	-	15 × A 1 ;		426	27,900	356		1,290	
0000SY04S32	WTB4		37		69,400	1 1,71	a gyaya) ar		415	21,200	206		759	
000SY04S33**	WT112B**		86.7		81,800	1.4	Jak also			21,000	93.1	1. 6. 4. 24.	1,320	
000SY04S34**	WT112B**		86		79,900		a de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de l		8 (1 18 Egw 11)	20,900	94.5	8 8 3 N.S.	1,380	
0000SY04S35	WT112A		28.6		247,000	na especial sur-	55 ad 200		i za tranca	17,000		1000 115	1,700	
0000SY04S36	WTG3		79.4		76,400	olsky Wet	<b>深态理</b> []		2.5.250 m 30 m	23,500	21.8	1. 1. 1. 1.	1,260	
0000SY04S37	WTG1		79.1		94,300	e constitues.	FREEZERATE.		application of the	, 24,300	52.7	1 5 5 2 BM	1,430	
)000SY04S38	WT117A	827	41,3		70,900	9.3	্বিশ্বর্থকার ব		and and distance	12,000	206	4417 1.6	2,180	
)000SY04S39	WT117B		35.9		179,000	E Postagos,	各門貨糧。		्रिकेट्ड <b>३</b> ए स्वर	24,200	. 71.7	का सुद्धाः	1,790	
ANK /Tupp indi		County Day in dian					F 0 1 1							

\_ANK (Type indicated) TELD DUPLICATE

Empty Box indicates NON-DETECTABLE

NR = NOT RUN

NA=NOT AVAILABLE

Estimated Bold = above action level

CL = Secondary Maximum Contamination Limit

# **Total Metals**

pg 2 water

e Name: э Number:

:ation:

Himco Dump

7500044

Elkhart County, Elkhart, Indiana

te Sampled:

4/25/00 through 4/26/00 6/8/00, 6/12/00 and 5/30/00

te Reported:

Region 5 Central Regional Laboratories

UNITS: ug/L

Sample #	Type/ID#	Na	V	Zn	Hg	Sb	As	Cd	Pb	Se	Ti
Lab	Reporting Limit	37.5	5.1	34.1	0.2	7	7	0.3	7	7	4
MCLs and A	Action Levels >	N/A	N/A	5000(SMCL)	2	6	50	5	15	50	2
		<u> </u>		ļ							
)000SY04S14	GPE-1	62,200	8.2	94.1				ļ	15		
)000SY04S15	GPE-2	86,300	7.3	149	0.2		13		27		
000SY04S16	GPE-3	31,500		86.1					12		
000SY04S17	WT 102	4,160									
0000SY04S18	WT102C	6,060									
000SY04S19	WT102B	25,900									
000SY04S20	WT102A	100,000									
000SY04S21	GP114-1	178,000									
000SY04S22	GP114-2	15,300		40.7			39		9		
0000SY04S23	GP114-3	17,300	8.8	156			38	0.3	35	8	
000SY04S24	GP16-1	21,600		43			7		10		
000SY04S25	GP16-2	16,300	29.9	172	0.1		74	0.5 <sup>®</sup>	47	8	
0000SY04S26	GP101-1	22,800	6	82.3			17		27		
0000SY04S27	GP101-2	25,200		34.3							
0000SY04S28	WT113B	15,300									
0000SY04S29	WT113A	14,200									
0000SY04S30	WTB1	55,100		36.9							
0000SY04S31	WTB3	20,300									
0000SY04S32	WTB4	4,600									
000SY04S33**	WT112B**	22,800									
000SY04S34**	WT112B**	23,300									
0000SY04S35	WT112A	13,800									
0000SY04S36	WTG3	18,400									
0000SY04S37	WTG1	13,800									
0000SY04S38	WT117A	5,110									
0000SY04S39	WT117B	17,100									
LANK (Type indicate	d)		indicates I	NON-DETECTAB	LE		Estimated		<del></del>		

LANK (Type indicated) FIELD DUPLICATE

NR = NOT RUN

NA=NOT AVAILABLE

Bold = above action level

3b report listed 0.6 ppb yet the chromatograph listed 0.5 ppb cadmium for 2000SY04S14. The fab narrative made no comments either,

1CL ≈ Secondary Maximum Contamination Limit

# **General Chemical Analysis**

Water

e Name: Himco Dump e Number:

7500044

Elkhart County, Elkhart, Indiana

4/25/00 through 4/27/00 te Sampled:

12-Jun-00 te Reported:

cation:

Region 5 Central Regional Laboratories

UNITS:

mg/L

Sample #	Type/ID#	Sulfate	Bromide
Lab			
	Reporting Limit	0.75	0.5
Action	n Level >	250 (SMCL)	N/A
000SY04S14	I GPE-1	389	
000SY04S15	GPE-2	4645 645 Hand	
000SY04S16	GPE-3	\$ 34 288 14 15 F	
000SY04S17	WT102	Strates do Later	
000SY04S18	WT102C	King ap 36 In this	
000SY04S19	WT102B	**************************************	
000SY04S20	WT102A	Einte 202 Amm	
000SY04S21	GP114-1	ACMERICA 187 AND AND AND ADDRESS OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PART	
000SY04S22	GP114-2	<b>到标题34178在1986</b>	
000SY04S23	GP114-3	อาการการการการการการการการการการการการการ	
000SY04S24	GP16-1	进入了2.44	
000SY04S25	GP16-2	第四次第134周分 <del>》</del> 第	
000SY04S26	GP101-1	<b>高级解析76</b> (4) (4) (4)	
000SY04S27	GP101-2	海线线线 97 线线线线	0.86
000SY04S28	WT113B	被控制。131年中以中	1.33
000SY04S29	WT113A	是的**;*24 stanfier	
000SY04S30	WTB1	<b>经验的证据的</b>	
000SY04S31	WTB3	132 minutes	
000SY04S32	WTB4	14 2 38 2 38 2 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4	
00SY04S33**	WT112B**	<b>学科研究第258</b> 连续的原	
00SY04S34**	WT1128**	· · · · · · · · · · · · · · · · · · ·	
000SY04S35	WT112A	學表現 434	
000SY04S36	WTG3	ANNE 32 4 A CO	
000SY04S37	WTG1	為35% 59 3 元 (5) ·	
000SY04S38	WT117A	minuta169@cm.	
000SY04S39	WT117B	318	
ANK (Type indicat	end)	Emply Box indicates N	ON DETECT

\_ANK (Type indicated)

Empty Box indicates NON-DETECTABLE

FIELD DUPLICATE NR = NOT RUN NA=NOT AVAILABLE

Estimated Bold = above action level

ICL = Secondary Maximum Contamination Limit

# **Total Metals**

pg 1 Water

Site Name:

Himco Dump

Site Number:

7500044

Elkhart County, Elkhart, Indiana Location:

Date Sampled:

5/1/00 through 5/3/00, 4/28/00

Date Reported:

6/12/00

Lab:

Region 5 Central Regional Laboratories

UNITS: ug/L

Sample #	Type/ID#	Al	Ва	Be	Ca	Cr	Co	Cu	Fe	Mg	Mn	Ni	K	Ag
Lab	Reporting Limit	118	2.6	2	148	6.7	13 2	9.3	46.5	79.4	1 9	21_	217	11.1
MCLs and	Action Levels >	50-200(SMCL)	2000	4	N/A	100	N/A	1300	300(SMCL)	N/A	50(SMCL)	N/A	N/A	100(SMCL)
						<u> </u>		İ		<u> </u>				
20000SY04S40	WT111A	463	256		113,000				12,600	19,100	1,440		8,380	
20000SY04S41	WT118B		93.4		193,000				5,790	20,000	126	_	7,800	
20000SY04S42	WT119A		94		215,000	19			2,650	70,800	318		22,200	
20000SY04S43	WT115A	8,860	105		241,000	12.8		19.7	6,500	12,400	380		4,440	
20000SY04S44	WTE2		43.5						2012		\$100 B 15		1777 144	
20000SY04S45	WTE1		51.3		174,000				5,150	35,500	204		4,120	
20000SY04S46	WTE3		8.1		58,300				2,240	23,800	21,1		1,810	
20000SY04S47	WT105A		160		57,400	23,9			407	16,500	160	73 3	1,360	
20000SY04S48	WT106A	3,090	77.6		175,000	-21.6		11	2,760	26,800	559		4,200	
20000SY04S49	WT101C	152	83.1		47,900	7.7			1,380	20,100	20.5		4,130	
20000SY04S50**	WT101A**		83.1		258,000	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			16,300	27,300	1,610		-6,730	
20000SY04S51**	WT101A**		82.4		242,000				16,100	27,500	1,540		6,810	
20000SY04S52	WT101B		72.3		137,000	N., W.			2,850	52,800	36		6,280	
20000SY04S53**	WT116A**		79.9		666,000	2.0		15.8	31,900	66,900	1,810		19,600	************
20000SY04S54**	WT116A**		79.6		685,000			15.5	32,400	66,100	1,800		18,900	
20000SY04S55	WT116B		135		203,000	74 <sup>N</sup> = 77 = 2			3,710	22,900	206		5.780	
20000SY04S56**	WT114A**		101		192,000	\$900 (Sec.)			6,510	+	276		3,390	
20000SY04S57	WT114B		69.4		108,000	\$250 kg 1. 1.			6,320		92.5	*	2,700	
20000SY04S58**	WT114A**		d Galler			& Colors			****		OF CARRES		34431	<del></del>
													7. 19.00 00.00	
BLANK (Type indicate	ed)	Empty Box indica	tes NON-D	ETECTAB	LE		Estimated	88 KW W	1	<del>'</del>	<u> </u>		<del></del>	

" FIELD DUPLICATE

NR = NOT RUN

NA=NOT AVAILABLE

Estimated ::

Bold = above action level

SMCL = Secondary Maximum Contamination Limit

## OLQ CHEMISTRY - REFER TO ATTACHED MEMO

# **Total Metals**

pg 2

Site Name:

Himco Dump

water

Site Number:

7500044

Location: Fikhai

Elkhart County, Elkhart, Indiana 5/1/00 through 5/3/00, 4/28/00

Date Sampled: Date Reported:

6/12/2000 and 6/15/2000

Lab:

Region 5 Central Regional Laboratories

UNITS: ug/L

Sample #	Type/ID#	Na	V	Zn	Hg	Sb	As	Cd	Pb	Se	ΤI
Lab	Reporting Limit	37.5	5.1	34.1	0.2	7	7	0.3	7	7	4
MCLs and A	Action Levels >	N/A	N/A	5000(SMCL)	2	6	50	5	15	50	2
							ļ			<u> </u>	
20000SY04S40	WT111A	39,400		Same with the same							
20000SY04S41	WT118B	18,700			Con the						
20000SY04S42	WT119A	61,100		a julija je kale.							
20000SY04S43	WT115A	24,600	14.5	37.7	grand in				11		
20000SY04S44	WTE2										
20000SY04S45	WTE1	19,100									
20000SY04S46	WTE3	12,400		The second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of th	13. 32 ( N - )					1	
20000SY04S47	WT105A	7,720		10 m m 10 m 10 m	1 3						
20000SY04S48	WT106A	29,300			of the second		46				
20000SY04S49	WT101C	36,100					10				
20000SY04S50**	WT101A**	66,800		134 157 15.	fyetr-						
20000SY04S51**	WT101A**	65,200									
20000SY04S52	WT101B	43,100									
20000SY04S53**	WT116A**	161,000		178	41.5 (6.						
20000SY04S54**	WT116A**	160,000		194	Argan C				13	20 超上年	
20000SY04S55	WT116B	23,500		Madda Astigo	1868 A. A.						
20000SY04S56**	WT114A**	123,000		Part Schall	Market .		9				
20000SY04S57	WT114B	14,100		2335 B 425	SARATE I		9			1	
20000SY04S58**	WT114A**	.राष्ट्रधारमधाः		Anthony Control	A see the second						
* PLANK (Type indicate	<u> </u>	<u>lll</u>		NON DETECTA							

\* BLANK (Type indicated)
\*\* FIELD DUPLICATE

Empty Box indicates NON-DETECTABLE

NR = NOT RUN

NA=NOT AVAILABLE

Estimated

Bold = above action level

SMCL = Secondary Maximum Contamination Limit

# **General Chemical Analysis**

Water

Site Name:

Himco Dump

Site Number:

7500044

Location:

Elkhart County, Elkhart, Indiana

Date Sampled:

4/28/00,5/1/00,5/2/00

Date Reported:

6/1/00

Lab:

Region 5 Central Regional Laboratories

UNITS:

mg/L

Sample #	Type/ID#	Sulfate	Bromide
Lab			
	Reporting Limit	0.75	0.5
Action	Level >	250 (SMCL)	N/A
20000SY04S40	WT111A	264	
20000SY04S41	WT118B	351	
20000SY04S42	WT119A	420	
20000SY04S43	WT115A	254 (表) (表)	0.62
20000SY04S44	WTE2	· 网络沙兰花 两个地位的人员	
20000SY04S45	WTE1	347	
20000SY04S46	WTE3	57-6-4	
20000SY04S47	WT105A	36 (4.54)	
20000SY04S48	WT106A	146	
20000SY04S49	WT101C		0.88
20000SY04S50**	WT101A**	218	0.52
20000SY04S51**	WT101A**	215	0.53
20000SY04S52	WT101B	211	
20000SY04S53**	WT116A**	1,260	2.38
20000SY04S54**	WT116A**	1,250	2.42
20000SY04S55	WT116B	3143	
20000SY04S56**	WT114A**	<ul><li>(金) (2011) 177 (40 (2012)</li></ul>	
20000SY04S57	WT114B	156	
20000SY04S58**	WT114A**		

\*\* FIELD DUPLICATE

NR = NOT RUN

NA=NOT AVAILABLE

Estimated

Bold = above action level

SMCL = Secondary Maximum Contamination Limit

# Regional Transmittal Form

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

D	ATE:
2.	
SUBJ	11 2 2 2000
FR	Received for Review on 7-3-200  ROM: Stephen L. Ostrodka, Chief (SMF-4J) Superfund Field Services Section  TO: Data User: USEPA 4/1760
	TO: Data User: USEPA 4/1760
;	
We ha	ve reviewed the data for the following case:
SITE	NAME: HIMCO DUMP FL. (IN)
CASE	NUMBER: 27876 SDG NUMBER: EDCJ8
	er and Type of Samples: 20 Waters
Sample	e Numbers: EDCJ8 EDCKØ-6,9 EDCLØ-3,4 EDCJ4,5,
Labora Labora	atory: ENVSYS Hrs for Review: 12.5
Follow	ring are our findings:
the da	tade usealle and acceptable with the
Arablero	itade useable and acceptable with the stime described in the attribut warmstrue.
V	Mohare Lagrin

CC: Cecilia Moore Region 5 TPO

Mail Code: SM-5J

LABORATORY: ENVIROSYSTEMS, INC. Page 2 of 8

SDG: EDCJ8 CASE: 27876

SITE: HIMCO DUMP (IN)

This review covers twenty (20) low concentration water samples, numbered EDCJ4, EDCJ5, EDCJ8, EDCJ9, EDCK0 - EDCK6, EDCK8, EDCK9, EDCL0 - EDCL4, EDCM1 and EDCM2, were collected on 03/14, 15, and 16/2000. The Envirosystems, Inc., of Columbia, MD received the samples on March 17, 2000, in good condition. The samples were analyzed for low concentration VOA, SVOA. Sample EDCL1 is identified as a Trip Blank and were analyzed for VOA only. Samples EDCL2, EDCL3, EDCM1 and EDCM2 were also analyzed for VOA only. All samples were analyzed per CLP SOW OLCO2.1.

Laboratory Control Samples (LCS) Identified as VLCSBG (VOA) and SCLS06 (SVOA) were analyzed in place of matrix spike/matrix spike duplicate (MS/MSD) samples.

Sample EDCL1 was identified as a Trip Blank. No samples appeared to be duplicate samples.

The VOA samples were analyzed within the holding time of fourteen (14) days for preserved water samples and the SVOA samples were extracted within the required holding time of seven days. The analysis of the semivolatile extracts were performed within forty (40) days. Therefore, the results for the VOA and the SVOA fractions are acceptable.

The reviewer's narrative and data qualifiers are noted in the following pages.

Reviewed by: W. Ira Wilson Lockheed-Martin/ESAT

LABORATORY: ENVIROSYSTEMS, INC.

Page 3 of 8

SDG: EDCJ8

CASE: 27876

SITE: HIMCO DUMP (IN)

Below is a summary of the out-of-control audits and the possible effect on the data for this case.

#### 1. HOLDING TIME

This review covers twenty (20) low concentration water samples, numbered EDCJ4, EDCJ5, EDCJ8, EDCJ9, EDCK0 - EDCK6, EDCK8, EDCK9, EDCL0 - EDCL4, EDCM1 and EDCM2, were collected on 03/14, 15 and 16/2000. The Envirosystems, Inc., Columbia, MD received the samples on March 17, 2000 in good condition. The samples were analyzed for low concentration VOA and SVOA. Sample ECCL1 is identified as a Trip Blank and were analyzed for VOA only. Samples EDCL2, EDCL3 EDCM1 and ECDM2 were also analyzed for VOA only. All samples were analyzed per CLP SOW OLC02.1.

The VCA samples were analyzed within the holding time of fourteen (14) days for preserved water samples; therefore, the results are acceptable.

The SVOA samples were extracted within the holding time of seven (7) days. The extracts were promptly analyzed within the required 40 days criteria. Therefore; the results are acceptable.

#### 2. GC/MS TUNING AND GC PERFORMANCE

The GC/MS tuning complied with the mass list and ion abundance criteria for BFB and DFTPP.

The Florisil Cartridge Check met the required QC criteria; therefore, the results are acceptable.

## 3. CALIBRATION

Initial and continuing calibration standards of VOA and SVOA were evaluated for the Target Compounds List (TCL) and outliers were recorded on the outlier forms included as a part of this narrative.

## 4. METHOD BLANK

Blanks VBLKBG and VBLKBH are the low concentration water Volatile Method Blanks. The Method Blank VBLKBG was clean, no TCLs or TICs

Reviewed by: W. Ira Wilson Lockheed-Martin/ESAT

LABORATORY: ENVIROSYSTEMS, INC. Page 4 of 8

SDG: EDCJ8 CASE: 27876

SITE: HIMCO DUMP (IN)

reported. Method Blank VBLKBH reported a detectable amount of Methylene Chloride (0.7 $\mu$ g/L)a common laboratory contaminant. Therefore, the presence of this contaminant in the samples associated with the Blank, VBLKBH, is qualified as non-detected (U) when the sample results are less than ten (10) times the Blank results. Blank VHBLKBH is identified as a Holding Blank sample which was also clean.

Please refer to Form I LCV for a list of associated samples.

Blank SBLK73 and SBLK76 are the Low Conc. water Semivolatile Method Blanks. Blank SBLK73 reported no TICs and no TCLs. Blank SBLK76 reported a detectable amount of Butylbenzylphthalate at  $3\mu g/L$  which is; a common laboratory contaminant and no TICs. The presence of this contaminant in samples associated with SBLK76 is qualified as non-detected "U" when the samples results are less than ten (10) times the Blank results.

Please refer to Form-IV LCSV for a list of associated samples.

#### 5. SURROGATE RECOVERY AND SYSTEM MONITORING COMPOUNDS

The low concentration recovery of the system monitoring spiking Compound (BFB = Bromofluorobenzene) for the volatile analysis and the recovery of the surrogate spiking compounds for the semivolatile analysis met the required QC limits for all samples; therefore, all results are acceptable.

### 6. MATRIX SPIKE/MSD SAMPLES

A Laboratory Control (LCS) Samples identified as VLCSBG (for volatile) and SLCS06 (for semivolatile) were used in place of a matrix spike/matrix spike duplicate sample for the low concentration analysis. All spike recoveries were within the QC limits; therefore, the results are acceptable.

## 7. FIELD BLANK AND FIELD DUPLICATE

Sample EDCL1 was identified as a Trip Blank analyzed for volatiles only. The sample was clean; no TCLs or TICs were reported.

Reviewed by: W. Ira Wilson Lockheed-Martin/ESAT

LABORATORY: ENVIROSYSTEMS, INC. Page 5 of 8

SDG: EDCJ8 CASE: 27876

SITE: HIMCO DUMP (IN)

#### 8. INTERNAL STANDARDS

The internal standard retention times and area counts for the low concentration volatile and semivolatile samples were within the required QC limits; therefore, the results are acceptable.

### 9. COMPOUND IDENTIFICATION

Target compounds and TICs were correctly identified by "best fit" library search method.

## 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

VOA and SVOA Target Compounds (TCLs) and Tentative Identified Compounds (TICs) were properly quantitated; therefore, the results are acceptable.

#### 11. SYSTEM PERFORMANCE

The GC/MS baseline indicated acceptable performance.

### 12. ADDITIONAL INFORMATION

None

Reviewed by: W. Ira Wilson\_Lockheed-Martin/ESAT

CASE SAS# 27876

POLUMN RTX 502.2

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# STENANT HIMCO DUNE FEMS, INC

F5100B	1	Initial cal			Contin	cal		Contin (	Jal		Contin 3	-al		Contin (	Cal	
Date/Time.		2/29/0	0-10	47	3/22	(00 =	931	3/73	100-0	736				<del> </del>		
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romethane	0 10															Т
inyl chloride	0 10	0,101		$\top$	2,131	34.1	-	0.131	29.7	T				1		1
hloroethane	0 01			1		1		7	1				<del> </del>		1	7
dethylene chloride	0.01	~	t — —	1		<b>—</b>	1-		T				1		1	+
cetone	0 01	0,012	40,2	ব	0,009	1	1	DIOLD	<b>†</b>				<del> </del>		1	+
arbon disulfide	0.01	0.329	7072	1	3.434	772	7	0,403		1	$\dagger$			$\overline{}$	<del>                                     </del>	+
,1-Dichloroethene	0.10	0.18G	<del> </del>	<del>}</del>	200	26.3	1	0.240		二	<del>                                     </del>		+	<del>                                     </del>	<del> </del>	+
.1-Dichloroethane	0 20	P1136	<del>                                     </del>	+	-P.435	26,3	10	4,040	720	<del>  •</del>	<del> </del>		<del>                                     </del>	<del>                                     </del>	<del>                                     </del>	╈
is-1,2-Dichloroethene	0 10		<del> </del>	┿			<del> </del>	+	<del> </del>	<del>}</del>	<del> </del>	+	<del></del>	+	+	╁
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,2-Dichloroethane	0 10	1-7-3	<b></b>	<del> </del>		<del></del>	├	4-11	<del> </del>	<del> </del>	<del></del>	<del></del>	+	<del> </del>	+	+-
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-butanone romochloromethane		0.027	<b></b>	ļ	+	<del>  </del>	<u> </u>	0,016	27.3	13	<u> </u>		<b>}</b> -	ļ	<del> </del>	+
· · · <del>-</del>	0.05	01/36	<b></b>	<u> </u>	0174	27.9	II	Pulled	<b></b>	<del></del>	<b></b>		<b>↓</b>	<b></b>	<del> </del>	↓
.1.1-Trichloroethane	0.10		<u> </u>	<b>└</b> ~	<u> </u>	<u> </u>	<b> </b>	ļ <u>-</u>	<del> </del>	<b></b>			<b>↓</b>	<b></b>	<del> </del>	1
arbon tetrachloride	0 10	1		<u> </u>	1	<u> </u>	<b></b>		L		<b></b>	<del></del>	<b>├</b> ──	ļ	<b>↓</b>	1
vodichloromethane	0 20			1	1				<u> </u>						<u> </u>	丄
<b>≠</b> Dichloropropane	0.01												L	<u></u>		L
is-1,3-Dichloropropene	0.20	0,236			0.04	26.3	$\Box \mathcal{I}$	0170	28.0	15			<u>L</u>		<u> </u>	L
richloroethene	0.30														L	l
bromochloromethane ,	0 10				1			1		Í						П
.1.2-trichloroethane	0.10			1												Г
enzene	0.40	1						<del>                                     </del>								Т
rans-1,3-Dichloropropene	0.10	0.124		t	0.087	20.8	उ	0,085	31.4	-57		1			1	T
romoform	0 05	P112	<del></del>	<del>                                     </del>	227	7	_		-4:			<del> </del>		1		1
-Methyl-2-Pentanone	0 01	0,046	<del></del>	<del>                                     </del>	0023	50x	5	0022	52,2	5		<u> </u>	1		1	
Чехаполе	0 01	0,025	450	ব	0.010		3	12,006	760	5	<del>                                     </del>		<b>†</b>		<del> </del>	1
	0.10	11/25	7211	1~	W.D.	0.0	-	1/10010	100			+	<del>                                     </del>	<del> </del>	<del> </del>	1
	0 10	<del></del>		<del> </del>	<del>}</del>			+	<del> </del>		<del>                                     </del>	<del></del>	<del> </del>	<del></del>	<del>                                     </del>	1
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	0.50	180		<del> </del>	0.860	7-11		100	28.2	<del>  ~ -</del>	<del></del>	+	<del> </del>	<del> </del>	+	╁
	0.10	<del></del>	·	├	+	-	<del></del>	+	<del> </del>	<b></b>	<del>                                     </del>	<del></del>	<del> </del>	<del> </del>	<del> </del>	╁
	0.10	<del></del>	ļ	├	<del></del>	$\vdash$		<del> </del>	<del></del>	<del> </del>	<del></del>	+	-	<del> </del>	<del> </del>	$\vdash$
<del></del>	0.30	<del></del>	<del></del>	<del>}</del>	→			<del> </del>	<del></del>	<del>                                     </del>		<del></del>	<del> </del>	<del> </del>	<del>                                     </del>	1
.2-Dibromo-3-chloropropane		- <del> </del>		_	12.00		ļ	10	<del> </del>			<del> </del>	<del> </del>	<del> </del>	<del> </del>	╀
.3-Dichlorobenzene	0 40	0,021	53.9	J	3.072	₩-	<b></b> -	0.012	<del> </del>		<del> </del>	<del></del>	<del> </del>	<del> </del>	<del> </del>	+-
	1		ļ <u>.</u> .	L		<b></b>	<b></b>	<del></del>	<del></del>		<del> </del>		<del> </del>			+
.4-Dichlorobenzene	0.40			ļ	1			<del></del> _	L	<b> </b>	<b> </b>	<del></del>	-	<b>—</b> —	<b></b>	4
Dichlorobenzene	0 40			<u> </u>					L	<b></b>	<b></b>		<u> </u>	<b>├</b>	<b>↓</b>	1
r.4-Trichlarobenzene	0 40				<u> </u>	<u> </u>	<b>!</b>	<b></b>	<u> </u>				-	₩		⊢
-Bromofluorobenzene	0 20		L	J	l	1	l	J	L	1	l	1	J	l	i	l
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partiples affected.					VBL	15 6	6	VBI	<u> </u>	<u> </u>	<del></del>			<b>└</b>		
					FD	Cri	Q	FO	CKQ	,	]			]		
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					EDC	_		15 V	M		<del>                                     </del>			<b>├</b>		_
		1	Who	<b>ノ</b>	EES	4.4	<b>-J</b> 5	HFDO	'M7	_						
		<del>+</del>	11/1			<u> </u>	1/2		2100	- n "	<del> </del>			1		

Reviewer's Init/Date 4400

J/R= All positive results are estimated "J" and non-detected results are unusable "R"

EDCLO-13 V HBLKBH

EDC54-**35** ECD 59 VLC5BG

<sup>• =</sup> These flags should be applied to the analytes on the sample data sheets

<sup># =</sup> Minimum Relative Response Factor

# CALIBRATION OUTLIER LOW CONCENTRATION WATER SEMIVOLATILE TCL COMPOUNDS

CASESAS#: 27876 (Page 1 of 2)

COLUMN: SITE

LABORATORY: L-NVIRD SYSTEMS
SITE NAME: HIMEO DUMP

Instrument# F 5100A	<del>1</del> 1		I Cal.			tin. Cal.			ntin. Cal		Co	ntin. Ca	1.	Co	ntin. Ca	1
Date/Time:	<u></u> _	3/17/	100-4		13/28/	0-82	29	3/1	14-7.	351						
	1 //	rf	%rsd	1 *	l rf	%d		rf	%d	*	rf	<u> </u> % d	1 * 1	rf	%d	1:
Phenol	0.80			<u> </u>			<u></u>					1	1_1		<u></u>	1
bis(2-chloroethyl) Ether	0.70		L	1			<u></u>					<u> </u>				1.
2-Chlorophenol	0.70			l					L							1
2-Methylphenol	[0.70]			1		!	1					1	1_1		L	1
2,2'-Oxybis(1-chl-propane)	0.01			1	L .							<u> </u>			L	1_
4-Methylphenol	[0.60]			1	L		1					<u>L</u>				1
N-nitroso-di-n-propylamine	0.50															
Hexachloroethane	0.30			1	l l		L					1	1		1	1
Nitrobenzene	[0.20]			1	L							L	1_1			Ī.
Isophorone	[0.40]			1	<u> </u>							L			1	
2-Nitrophenol:	0.10				1 1							L				L
2,4-Dimethylphenol	0.20											L				L
bis-(2-chloroethoxyl)methane	[0.30]			1			Ī I					1			1	
2,4-Dichlorophenol	0.20			Ī	1		L	·				l	LĴ			Ī
1,2,4-Trichlorobenzene	0.20			Ī			ĪĪ			1		İ	1 1			$\overline{L}$
Naphthalene	[0.70]			Ī	] ]					<u> </u>			$\overline{1}$		1	Ι
4-Chloroaniline	10.011			1	]							Ī	1 1		J	1
Hexachlorobutadiene	0.01			1	1		1					1	1 1		1	1
4-Chloro-3-methylphenol	0.20			1	1		Ī					1	1 1		1	Ī
2-Methylnaphthalene	0.40		1	1			1			1 1		1	1 1		1	Ī
Hexachlorocyclopentadiene	0.01		1	1	1		1					1	1 1		ł	1
2,4,6-Trichlorophenol	[0.20]		<u> </u>	ī	1		1			1 1		Ī T			i	1
2,4,5-Trichlorophenol	0.20			1			1					i	ī		1	Ī
2-Chloronaphthalene	0.80		i ——	Ī	ì	1	ī						1 1		i	1
2-Nitroaniline	0.01		1	ī	i		Ī					1	Ī		1	ī
Dimethyl phthlate	0.01		,	ì	j	]	i	]	]			i	1		<u> </u>	ī
Acenaphthylene	1.30			ī	<u> </u>	1	1	i				ī	1		1	ī.
2.6-Dinitrotoluene	10.20				!	!	i	<u> </u>	l	1 1		<del>                                     </del>			<u>                                     </u>	i
3-Nitroaniline		0.231	<u> </u>	<del> </del>	10 582	188	17	0.366	58.4	131		<del>1</del>	1 1		<del></del>	<del></del>
Acenaphthene	0.30		<u>.                                    </u>	+	1	!	1	 	!			ì	1 1		<del></del>	<del> </del>
2,4-Dinitrophenol		0.139	<u> </u>	1	10.191	1/// 5	1-	0.191	137. K	17		i	1 1		! !	1
4-Nitrophenol		0,185		<del></del>	10,196 10.314	1017	134	IA, TOC	1501	1.7		<del></del>	1 1		<u> </u>	+
Dibenzofuran	0.80		<del>1</del>	<del></del>	VIII -	1	1	1	1	1 1		<u>;</u>	<del></del>		<u> </u>	+
2.4-Dinitrotoluene		0300	<del></del>	<del> </del>	10 44	1742	1	10,454	1370			<del></del>	1 1		1	+
2,4-Dunitotolidene	10.20	vergy	·	<u> </u>		K 73			CK5			<del> </del>			<del></del>	-1
Affected samples:	l -					S06		FOR	166 J	10				!		
Anaca samples.	. 				EDC			FDO	C D	7-71						
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	i.							EDG						<u> </u>		
	j.	· · · · ·			FOC			EDC						L		
	1.	-			1 2 <u>2</u>	121	6	IEVC	ces b					<u> </u>		
	١.				<u> </u>			<u> </u>								

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

Reviewer's Init/Date: 4/4/90

<sup>• =</sup> These flags should be applied to the analytes on the sample data sheets.

<sup># =</sup> Minimum Relative Response Factor

# CALIBRATION OUTLIER LOW CONCENTRATION WATER SEMIVOLATILE TCL COMPOUNDS (Page 2 of 2)

Pg 8 of 8

	(1 <b>Lg</b> 2 01 2)	
CASEISAS#: 27876		
CASE\SAS#: / b		LA
COLUMN:		SI

LABORATORY: ENVIRORY STERMS
SITE NAME: HULCO DUMP

Instrument# F5100A	11		al Cal.			tin. Cal			ntin. Ca		Co	ntin. Ca	1.	Co	ontin. Ca	1.
Date/Time:		3/1	1/00-9	801	13/260	100 82	9	13/29/	50- 7:	35				L		
		rf	%rsd		rf	%d	•		1 %d		гſ	<b>%</b> d		_rf	1 %d	1
Diethylphthalate	0.01			Ī	Ī	Ī		1	L							Ī
4-Chlorophenyl-phenylether	0.40		1	l	Ī	1	1	I	1			L	Ī_		L	I
Fluorene	[0.90]		1	L	Ī.,	l	1	L		1 1		L	1		1	l
4-Nitroaniline	10.01	5,447	142,4	LI	10.315	114.3	15	0,289	196.6	121			1		1	Ī
4,6-Dinitro-2-methylphenol	0.01			L	Ī		1		<u> </u>	Li						
N-nitrosodiphenylamine	[0.01]		Ī	L	Ī		L.		I			<u> </u>	$\mathbf{L}$		1	Ĺ
4-Bromophenyl-phenylether	[0.10]		1	1	Ī	l	1	]	1	1_1		1	$\Gamma$			ī
Hexachlorobenzene	[0.10]		I	1	1	!	1	1	1							Ī
Pentachlorophenol	[0.05]		1	Ī	1	!	1		Ī :	LI					1	Ī
Phenanthrene	10.70			1		]	1	!	<u> </u>			1	1 1		Ī	Ī
Anthracene	10.70		<u> </u>	1	<u> </u>		1		1	1 1		1				ī
Di-n-butylphthalate	10.01		ì	l	<u> </u>		Ī		!			1	1 1		1	ī
Fluoranthene "	10.601		1	1	1		1		1				ī		1	Γ
Pyrene	10.60		1	1	!		Ī		1			1			i	Ī
Butylbenzylphthalate	[0.01]		1	1	1		1			1. 1			1_1		i	Ī
3,3'-Dichlorobenzidine	10.01	2,202	162.0	1.7	10.302	49.5	J	00213	I	1 1		1	1 1			Ī
Benzo(a)anthracene	[0.80]			Ī			1		l			L	1_1		1	Ī
Chrysene	10.70		1	l	1	L	1		1				11		Ī	Ī
bis(2-Ethylhexyl)phthalate	0.01		1	1	[	1	Ī	l	1				<u> </u>		L	Ī
Di-n-octyl phthalate	0.01		1	Ī	Ī	!	1		Ī			L	ĪШ		1	$\overline{\Box}$
Benzo(b)fluoranthene	[0.70]		1	l	1	f .	1		I				$\overline{1}$		L	Ĺ
Benzo(k)fluoranthene	10.70	1334	1	1	11:336	<u> </u>	1	4724	128.8	4		1	1_1		L	Ī
Benzo(a)pyrene	[0.70]		1	l	!	1			I	<u> </u>			ĪШ		1	Ī
Indeno(1,2,3-cd)pyrene	[0.50]		1	1	1		1	1	1	$\overline{1}$		1 _	$\overline{1}$		1	L
Dibenz(a,h)anthrancene	[0.40]	5455	Ī	1	10,821	25.3	13	12.419	129.6	131					<u> </u>	Ī
Benzo(g,h,i)perylene	10.501		1	1	1				1	1 1		1	1 1		1	Ī
	1 1		1	1	Ī	1	Ī	i	1			!	1 1		1	Ī
Nitrobenzene-d5	[0.01]		Ī	1	1		Ĺ								L	Ĺ
2-Fluorobiphenyl	0.70		1	1	1		Ī.	L							1	Ī
Terphenyl-d14	0.50			1	1		1	1				1				Ī
Phenol-d5	0.80		Ī	1	1	1	1		1			1			L	Ī
2-Fluorophenol	0.60		1	Ī	I	L	1					I			L	Ī
2,4,6-Tribromophenol	0.01		1	]	Ī	1	ī	1	1			1	1 1			Ī

Reviewer's Init/Date: 4400

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

ESAT-5-022.3 1/95

# ORGANIC DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature used in this document, the following code letters and associated definitions are provided:

VALUE - when/if the result of a value is greater than or equal to the Contract Required Quantitation Limit (CRQL).

- U Indicates that the compound was analyzed for, but not detected. The sample quantitation limit corrected for dilution and percent moisture is reported.
- Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound where the result is less than the sample quantitation limit, but greater than zero. The flag is also used to indicate a reported result having an associated QC problem.
- R Indicates the data are unusable. (NOTE: The analyte may or may not be present.)
- N Indicates presumptive evidence of a compound. This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search.
- P Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns. The lower of the two results is reported.
- C Indicates pesticide results that have been confirmed by GC/MS.
- B Indicates the analyte is detected in the associated blank as well as in the sample.
- E Indicates compounds whose concentrations exceed the calibration range of the instrument.
- D Indicates an identified compound in an analysis has been diluted. This flag alerts the data user to any differences between the concentrations reported in the two analysis.
- A Indicates tentatively identified compounds that are suspected to be aldol condensation products.
- G Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method.
- L Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method.
- T Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample.

X,Y,Z are reserved for laboratory defined flags.

SEPA United States Cor	Environmental Protection Agency tract Laboratory Program	Organic Tra & Chain of Cu (For Organic	affic Report  stody Record  CLP Analysis)	Case No. 27876	
1. Matrix (Enter in Column A) 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. Oil (High only) 7 Waste (High only) 8. Other (Specify in Column A)  1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. Other (Specify in Column D) N. Not preserved	2. Region No. Sampling Co.  Sampler (Name)  Sampler Signature  Second Signature  CLEM Action  Lead FS  REM PA  PRP  RA  ST  ST  SI  SI  SI  SI  SI  SI  SI  SI	4. Date Shipped Carrier 3/16/00 FPA ATTRIB Number 71936345 5. Ship To Enviro Syst 9200 Rumse Columbia, Mil	ems, Inc. RD Saite B 21045	6. Date Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Received - Rec	7. U.J
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(2/98) SEE REVERSE FOR PURPOSE CODE DEFIN 375...12

#### SDG NARRATIVE

LABORATORY NAME: ENVIROSYSTEMS, INC. APR 3 2000

CASE #: 27876 SDG #: EDCJ8 REGION: V

CONTRACT: 68-D7-0005

DATES SAMPLES RECEIVED AT LABORATORY: 17 - 18 MARCH 2000

## SAMPLE ANALYSES INCLUDED IN THIS REPORT:

EPA SAMPLE #	LAB ID #	ANALYSIS	VOA pH
EDCJ8	00030902	VDA, BNA	2
EDCKO	00030903	VOA, BNA	2
EDCK1	000 <b>30904</b>	VOA, BNA	2
EDCK2	000 <b>30905</b>	VOA, BNA	2
EDCK3	000 <b>30906</b>	VOA, BNA	5
EDCK4	00030907	VOA, BNA	3
EDCK5	00030908	VOA, BNA	2
EDCK6	0003 <b>0909</b>	VOA, BNA	5
EDCK9	00030910	VOA, BNA	2
EDCLO	00030911	VOA, BNA	2
EDCL1	00030912	VOA	2
EDCL2	00030913	VOA	2
EDCL3	00030914	VOA	2
EDCJ4	00030920	VOA, BNA	2
EDCJ5	000 <b>30921</b>	VOA, BNA	2
EDCJ9	0003 <b>0722</b>	VOA, BNA	2
EDCK8 -	-00030923	VOA, BNA	2
EDCL4	00030924	VOA, BNA	5
EDCM1	000 <b>309</b> 25	VOA	2
EDCM2	00030926	VDA	2

Samples for this contract are analyzed by EPA SOW QLCO2.1 for low concentration water.

All instances where GC/MS manual integration was necessary are initialled and dated by the analyst.

The volatile analysis was performed using a Restek 105 meter RTX-502.2 column with an inner diameter of 0.53 mm and a 3 micron film thickness.

The trap used with the autosampler is a 30 cm Supelco, Inc K Trap (VOCARB 3000) packed with Carbopack B/Carboxen 1000 & 1001.

All QC criteria was met for all sample in this SDG.

Each of the twelve lab control sample compound recoveries was within the QC limits.

#### SCHIVOLATILES SECTION:

This semi-volatile analysis was performed using a HP-5MS 30 meter column with an inner diameter of 0.25 mm and a 0.25 micron film thickness.

All samples were extracted within holding time on 3/22/00 however eight of the samples were lost because the condenser cooling water was not turned on. The eight samples were reextracted on 3/23/00 and samples EDCK5, EDCK6, EDCK9 and EDOLO were outside of the five day holding time.

 ${\mathbb R}$  )tylbenzylphthalate is present below the detaction limit in method blank SBLK76. The compound is present in several of the samples and may be a result of laboratory contamination.

All other QC criteria was met for all samples in this SDG

Each of the fourteen lab control sample compound recoveries was within the QC limits.

I CERTIFY THAT THIS DATA PACKAGE IS IN COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE CONTRACT, BOTH TECHNICALLY AND FOR COMPLETENESS, FOR OTHER THAN THE CONDITIONS DETAILED ABOVE. RELEASE OF THE DATA CONTAINED IN THIS HARDCOPY DATA PACKAGE HAS BEEN AUTHORIZED BY THE LABORATORY MANAGER OR HIS DESIGNEE, AS VERIFIED BY THE FOLLOWING SIGNATURE:

William Brewington

Organics Section Manager

Brewington DATE: 350/00
30 March

2LCA LDW CONC. WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

ab Name: ENVIROSYSTEMS | Contract 58-D7-0005

tab Code: ENVSYS - Case No.: 27876 - SAS No. - SDG No.: EDCUB

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I EPA	BFB	101	HER	:TO	T!
I SAMPLE NO.	1%REC	# :		וטט	T:
=========	:====	==	====	:	= ;
01:EDCJ4	1 100	1	0	: 0	i f
02:EDCJ5	91	:	0	1 0	t
03:EDCJ8	93	;	0	1 0	;
04:EDCJ9	84	;	0	1 0	ţ
05:EDCKO	91	ŧ	0	: 0	ŧ
06¦EDCK1	1 89	1	0	: 0	ţ
07:EDCK2	92	- 1	0	: 0	ţ
08 ( EDCK3	1 92	1	0	1 0	ť
09:EDCK4	94	ţ	0	: 0	1
10:EDCK5	96	ŀ	0	; O	ţ
11 EDCK6	: 89	i i	0	1 0	ſ
12!EDCK8	94	1	0	: 0	1
13:EDCK9	96	1	0	: 0	:
14:EDCLO	94	ł	0	: 0	í
15:EDCL1	96	į	0	: 0	i
16:EDCL2	90	1	0	: 0	1
17:EDCL3	103	ŧ	0	: 0	i
18:EDCL4	96	1	0	: 0	í
19:EDCM1	99	:	0	: 0	1
20:EDCM2	94	1	0	1 0	ţ
21:VHBLKBH	94	;	0	: 0	į
22:VLCSBG~	87	ŀ	0	: 0	;
23:VBLKBG	85	:	0	; 0	:
24:VBLKBH	92	ŧ	0	1 0	{
1	!			!	_;

QC LIMITS %REC ( 80-120)

BFB = Bromofluorobenzene

<sup>#</sup> Column to be used to flag recovery values

<sup>\*</sup> Values outside of contract required QC limits

D Surrogate diluted out

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.. WATER VOLATILE LAB CONTROL SAMPLE RECOVERS

-EPA SAMPLE NO

: VLCSBG

Name ENVIROSYSTEMS Contract 68-D7-3005 :\_

Lat Code: ENVSYS | Case No.: 27876 | SAS No.: | SDG No.: EDCJ8

Mab Pampie ID: 0322LCSB1

Wab File (D) 0322LCSB1

LCS Lot No.

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

LCS Aliquot: 10 (u1)

	AMOUNT	;	AMOUNT	;		1
	ADDED	÷	RECOVERED	;		; QC ;
COMPOUND	(ng)	ŧ	(ng)	17	REC	#:LIMITS!
	;=======	= ; =	=========	= ; =	====	=={=====;
: Vinyi chloride	125	ľ	84. 1	1	67	:60-140:
: 1.2-Dichloroethane	125	;	151	;	121	160-1401
: Carbbo tetrachloride	125	;	124	;	99	160-1401
' 1.2-Dichloropropane	125	ŧ	115	:	92	160-1401
1 Trichloroethene	125	1	113	!	90	160-1401
: 1.1.2-Trichloroethane	: 125	1	112	;	90	:60-140:
: Benzene	125	;	154	;	123	160-1401
: cis-1,3-Dichloropropene	125	1	92. 2	1	74	:60-140:
: Bramef <b>orm</b>	125	1	130	1	104	160-1401
Tetrachloroethene	125	1	106	;	85	:60-140:
: 1,2-Dibromoethane	125	;	112	1	89	160-1401
: 1,4-Di::lorobenzene	125	1	110	;	88	160-1401
	f	_		_		

1 I lump to be used to flag LCS recovery with an asterisk

> Vilues outside of QC limits

% Recovery: O outside limits out of 12 total

COMMENTS: VLCSBG VOA LAB CONTROL SAMPLE 3/22/00 25ML

F5100B 35(5)/240/10 HDF

LOW CONC WATER VOLATILE METHOD BLANK SUMMAF.

Lab Name ENVIROSYSTEMS Contract 68-D7-3005

VBLKBG

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCU8

Lab Sample ID: 0322VWBB1

Date Analyzed: 03/22/D0

Lab File ID: 0322VWBB1

Time Analyzed: 1006

Instrument ID: F5100B

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS.

EPA	1	LAB	:	LAB	t (	TIME	
: SAMPLE NO.	;	SAMPLE ID	ŧ	FILE ID		ANALYZED :	
=========	; ; :		; =	=======================================	=		
Q1:EDCJ4	ŀ	00030920	;	030920	•	1756	
02:EDCJ5	;	00030921	ţ	030921	:	1830 ;	
031EDCJ8	;	00030902	¦	030902	t t	1044	
04:EDCJ9	1	00030922	ľ	030922	(	1903	
05:EDCKO	;	00030903	ļ	030903	ł i	1117	
06:EDCK1	ŀ	00030904	;	030904	t	1151	
07:EDCK2	i	00030905	1	030905	;	1224	
08:EDCK3	ţ	00030906	;	030906	í	1257	
091EDCK4	;	00030907	;	030907	t i	1330	
10:EDCK5	;	00030908	;	030908	ŀ	1403 :	
11:EDCK6	:	00030909	:	030909	ŧ	1436	
12:EDCK9	1	00030910	ł	030910	:	1510 ;	
13:EDCLO	ţ	00030911	ť	030911		1543	
14:EDCL1	1	00030912	ţ	030912	t l	1616	
15:EDCL2	1	00030913	f	030913	€	1649 !	
16:EDCL3	;	00030914	į	030914	£	1723 {	
17:VLCSBG	;	0322LCSB1	į	0322LCSB1	į	1936	
77	:		. 1		!	<u></u>	

VBLKBG VOA LAB BLANK 3/22/00 25ML F5100B 35(5)/240/10 WB

4LCA

LOW CONC WATER VOLATILE METHOD BLANK SUMMARY

EFA SAMPLE NO

VBLKBH

Lab Name: ENVIROSYSTEMS

Contract 58-07-0005 :

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No. EDCU8

Lab Sample ID: 0323VWBB1

Date Analyzed: 03/23/00

Lab File ID: 0323VWBB1

Time Analyzed: 1028

Instrument ID: F5100B

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS.

: EPA	:	LAB	;	LAB	!	TIME	- ;
: SAMPLE	NO.	SAMPLE ID	1	FILE ID	:	ANALYZED	; (
=======	=====;	=========	== ; ==	=======================================	=== {	=======	= ;
01:EDCK8	1	00030923	; (	30923	i	1111	ţ
02:EDCL4	!	00030924	; (	30924	(	1144	1
Q3   EDCM1	t i	00030925	; (	30925	:	1218	1
04   EDCM2	1	00030926	; 0	30926	;	1251	;
05:VHBLKBH	1	0323VHBLKB1	. ; 0	)323VHBLKB:	1 :	1324	1
;	}				;		:

COMMENTS: VBLKBH VOA LAB BLANK 3/23/00 25ML

F5100B 35(5)/240/10 WB

iLJA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA BAMPLE NO

: VHBLKBH

Lab Name ENVIROSYSTEMS Contract 58-D7-0005 :\_\_\_\_

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJB

Lab Sample ID. 0323VHBLKB1

Date Received: •

Lab File ID: 0323VHBLKB1

Date Analyzed: 03/23/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

CAC NO		CONCENTRATION	_
CAS NO.	COMPOUND 5423/VM	(ug/L)	
74-87-3	Chloromethane	1	; : υ
74-83-9	Bromomethane	1	ŧŪ
75-01-4	Vinul chloride	1	
75-00-3	Chloroethane	_ 1	: U
/2-08-5	Methulene chloride	1 2 :	: U
67-64-1	Acetone	5	
75-15-0	Carbon disulfide	1	: U
75-35-4	1,1-Dichloroethene	1	:U
75-34-3	1,1-Dichloroethane	1	! U
156-59-2	cis-1,2-Dichloroethene	1 1	(U
156-60-5	trans-1,2-Dichloroethene	1 1	
57-66-3	Chlaroform	_ [	: U
107-06-2	1,2-Dichloroethane	1	: U
78-93-3	2-Butanone	- 5	
74-97-5	Bromochloromethane	1 :	Ü
71-55-6	1, 1, 1-Trichloroethane	1	Ü
56-23-5	Carbon tetrachloride	1	
75-27-4	Bromodichloromethane	1	
79-87-5	1,2-Dichloropropane	1	
10061-01-5	cis-1,3-Dichloropropene	1	
79-01-6	Trichloroethene	. 1	ŧÙ
124-48-1	Dibromochloromethane	1	10
79-00-5	1,1,2-Trichloroethane	- i 1	l U
71-43-2	Benzene	1	١Ū
10061-02-6	trans-1,3-Dichloropropene		(Ü
75-25-2	Bromoform	1	ŧΰ
108-10-1	4-Methul-2-pentanone	5	
591-78-6	2-Hexanone	- 5	_
127-18-4	Tetrachloroethene		١Ū
79-34-5	1, 1, 2, 2-Tetrachloroethane	1	IÙ
106-93-4	1,2-Dibromoethane	1	; Ü
108-88-3	Toluene	1	
108-90-7	Cḥlarobenzene	1	
100-41-4	Ethylbenzene	1	
100-42-5	Styrene	1	
1330-20-7	xylenes (total)	1	
541-73-1	1, 3-Dichlorobenzene	1	
106-46-7	1,4-Dichlorobenzene	1	
95-50-1	1, 2-Dichlorobenzene	1	
76-12 <del>-</del> 8	1,2-Dibromo-3-chloropropane	1	
17002	1, 2, 4-Trichlorobenzene	1	

ILCA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLKBG

EPA SAMPLE NO

Lab Name: ENVIROSYSTEMS

Contract 58-D7-0005

Lab Code: ENVSYS

Case No.: 27876 SAS No.

SDG No .: EDCJ8

Lab Sample ID: 0322VWBB1

Date Received:

Lab File ID:

0322VWBB1

Date Analyzed: 03/22/00

Purge Volume:

25.00 (m1)

Dilution Factor: 1.0

GC Col

/L) G 1 | U 1 !11 1 10 1 :U 2 19 5 IU 1 ; U 1 1U 1 IU 1 10 1 : U 1 10 1 ; U 5 !U 1 | U 1 ;U 1 | U 1 !U : U 1 ! ! ! ! 1 (U 1 (U : U 1 IU 1 10 1 !U 5 10 5 : U 1 ;U 1 | U 1 10 1 | U 1 | U 1 | U 1 | U 1 10 10 1 ! U 1 IU 1 10 | 96-12-8-----1,2-Dib omo-3-chloropropane\_\_|

1 ; U

o 1	ստո:	RTX-502. 2	ID: 0.530 (mm) Length: 105 (m)		
	CAS	NO.	COMPOUND	CONCENTRATION (ug/L)	N
!				<del></del>	;
1	74-8	37-3	Chloromethane	1	1
;	74-8	33-9	Bromomethane :	1	;
ţ	75-0	)1-4	Vinyl chloride /	1	;
1	75-(	20-3	Chloroethane :	1	;
t i	75-(	39-2	Methulene chloride :	5	
1	67-6	54-1	Acetone:	5	;
1	75-1	15-0	Carbon disulfide	1	;
ì	75-3	35-4	1,1-Dichloroethene	1	;
ì	75-3	34-3	1,1-Dichloroethane:	1	1
;	156	-59-2	cis-1,2-Dichloroethene	1	t t
ì	156	-60-5	trans-1,2-Dichloroethene;	1	,
į	67-6	56-3	Chloroform	1	1
t i	107	-06-2	1,2-Dichloroethane	1	,
1	78-9	73-3	2-Butanone;	. 5	;
1	74-9	77-5	Bromochloromethane	1	ł
1	71-	55-6	1,1,1-Trichloroethane ;	1	;
1	56-2	23-5	Carbon tetrachloride :	1	1
1	75-2	27-4	Bromodichloromethane :	1	1
;	78-9	37-5	1,2-Dichloropropane	1	;
1	100	61-01-5	cis-1,3-Dichloropropene	1	;
•	79-	01-6	Trichloroethene;	1	3

: 124-48-1-----Dibromochloromethane\_\_\_\_

1 71-43-2-----Benzene\_\_\_\_

| 75-25-2----Bromoform\_\_\_\_

| 591-78-6----2-Hexanone\_\_\_\_ | 127-18-4-----Tetrachloroethene

| 1330-20-7-----Xylenes (total)\_\_\_\_

| 108-88-3----Toluene\_\_\_\_

100-42-5----Styrene\_\_\_\_

79-00-5----1, 1, 2-Trichloroethane\_\_\_\_

: 10061-02-6----trans-1,3-Dichloropropene\_\_\_\_

| 108-10-1-----4-Methyl-2-pentanone

79-34-5----1, 1, 2, 2-Tetrachloroethane\_\_\_\_

106-93-4----1,2-Dibromoethane\_\_\_\_

108-90-7-----Chlorobenzene\_\_\_\_

100-41-4----Ethylbenzene\_\_\_\_

| 541-73-1----1,3-Dichlorobenzene\_\_\_\_

106-46-7----1,4-Dichlorobenzene\_\_\_\_\_

95-50-1----1,2-Dichlorobenzene\_\_\_\_

| 120-82-1----1,2,4-Trichlorobenzene\_\_\_

1LCE

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

: VBLKBG

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005 : \_\_\_

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 0322VWBB1

Date Received: •

Lab File ID: 0322VWBB1

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 0

;		1		ŀ	· <del></del>	EST.	CONC.	:	
;	CAS NUMBER	: COMPOU	IND NAME	}	RT :	¦ (ບg	/L)	;	G.
; =			=========		=====;	=====	======	==	===

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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

ERA GAMFLE TL

Lab Name, ENVIROSYSTEMS

Contract 68-D7-0005

VELKBH

Lab Code: ENVSYS Case No.: 27876 SAS No.:

COMPOUND

SDG No. : EDCJ8

Lab Sample ID: 0323VWBB1

CAS NO.

Date Received

Lab File ID:

0323VWBB1

Date Analyzed: 03/23/00

Œ

Purge Volume: 25,00 (ml)

Dilution Factor: 1 0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

CONCENTRATION (Ug/L)

| 74-87-3-----Chloromethane\_\_\_\_ 1 ; U 1 74-83-9-----Bromomethane\_\_\_\_ 1 10 1 75-01-4-----Vinyl chloride\_\_\_\_\_ 1 10 1 75-00-3-----Chloroethane\_\_\_\_ 1 10 1 75-09-2-----Methylene chloride\_\_\_\_\_ 0.711 : 67-64-1-----Acetone\_\_\_\_ 5 10 | 75-15-0-----Carbon disulfide\_\_\_\_ 1 : U 1 75-35-4-----1,1-Dichloroethene\_\_\_\_ 1 10 1 75-34-3-----1,1-Dichloroethane\_ 1 (0 1 156-59-2----cis-1, 2-Dichloroethene\_\_\_ 1 (U | 156-60-5----trans-1,2-Dichloroethene\_\_\_\_ 1 10 | 67-66-3-----Chloroform 1 10 107-06-2----1,2-Dichloroethane\_\_\_\_ 1 ; U : 78-93-3----2-Butanone\_\_\_\_ 5 10 74-97-5----Bromochloromethane\_\_\_\_ 1 (U 71-55-6----1,1,1-Trichloroethane\_\_\_\_ 1 10 | 56-23-5----Carbon tetrachloride 1 (U | 75-27-4----Bromodichloromethane\_\_\_\_ 1 : U | 78-87-5-----1,2-Dichloropropane\_\_\_\_\_ 1 10 1 10061-01-5----cis-1,3-Dichloropropene 1 : 0 | 79-01-6----Trichloroethene\_\_\_\_ 1 IU 124-48-1-----Dibromochloromethane 1 :U | 79-00-5-----1,1,2-Trichloroethane\_\_\_\_ 1 10 : 71-43-2-----Benzene\_\_\_\_ 1 (U 10061-02-6----trans-1,3-Dichloropropene\_\_\_ 1:0 : 75-25-2----Bromoform\_\_\_\_ 1 (U 108-10-1----4-Methyl-2-pentanone\_\_\_\_ 5 10 591-78-6----2-Hexanone\_\_\_\_ 5 10 127-18-4----Tetrachloroethene 1 10 : 79-34-5-----: 1, 2, 2-Tetrachlorgethane\_\_\_\_: 1 : U 106-93-4----1,2-Dibromoethane\_\_\_\_ 1 10 108-88-3----Toluene\_\_\_\_ 1 108-90-7-----Chlorobenzene\_\_\_\_ 1 (U : 100-41-4----Ethylbenzene\_\_\_\_ 1 | U 1 100-42-5----Styrene\_\_\_\_ 1 10 1 10 541-73-1----1,3-Dichlorobenzene\_\_\_\_\_ 1 :U 106-46-7-----1, 4-Dichlorobenzene\_\_\_\_\_\_ 95-50-1-----1, 2-Dichlorobenzene\_\_\_\_\_ 1 : U 1 :U | 96-12-8-----1,2-Dibromo-3-chloropropane\_\_| 1 10 120-82-1----1, 2, 4-Trichlorobenzene\_\_\_\_\_ 1 10

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

VBLKBH

Lab Name: ENVIROSYSTEMS

Contract 68-D7-0005 |

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

EPA SAMPLE NO

Lab Sample ID: 0323VWBB1

Date Received: . . .

Lab File ID: 0323VWBB1

Date Analyzed: 03/23/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 0

-	i 1		***************************************	<u> </u>	;	EST. CONC.	1	;	
: CAS NUMBER	* *	COMPOUND	NAME	RT	1	(ug/L)	; G	} ;	
	:		=========	=======	= ; =	=========	;===	:==;	
(	1			1	)		1	;	

LOW CONC WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA BAMELE WE

: VLCSBG

Lab Name ENVIROSYSTEMS Contract 68-D7-0005 :\_\_

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 0322LCSB1

Date Received:

Lab File ID: 0322LCSB1

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1 0

	<	CONCENTRATION	
CAS NO.	COMPOUND S	(ug/L)	Q
74-87-3	Chloromethane	1	
74-83-9	Bromomethane		
75-01-4	Vinyl chloride		O
75-00-3	Chloroethane		: 1
75-09-2	Methylene chloride	' 	
67-64-1	Acetone	'	
75-15-0	Carbon disulfide	; 5 ;;	
75-35-4	1, 1-Dichloroethene		-
75-34-3	1,1-Dichloroethane	_	-
154-50-0	cis-1, 2-Dichloroethene		
15/ /0 =	cis-i, 2-pichloroethene	1 11	_
130-00-3	trans-1,2-Dichloroethene		
107 0/ 0	Chloroform_	1 1	
70,706-2	1,2-Dichloroethane	!	
/8-93-3	2-Butanone		
/4-97-5	Bromochloromethane	1 11	
71-55-6	1,1,1-Trichloroethane		J
56-23-5	Carbon tetrachloride	1 5 1	
75-27-4	Bromodichloromethane	1 1 11	J
78-87-5	1,2-Dichloropropane	: 5 :	
10061-01-5	cis-1,3-Dichloropropene	1 4 1	
79-01-6	Trichloroethene	: 5 :	
124-48-1	Dibromochloromethane	: 1 :	Ų
79-00-5	1,1,2-Trichloroethane	4 :	
71-43-2	Benzene	6 1	
10061-02-6	trans-1,3-Dichloropropene		
	Bromoform	5 1	
	4-Methyl-2-pentanone	5 11	ل
591-78-6	2-Hexanone	5 ;1	J
127-18-4	Tetrachloroethene	4	_
79-34-5	1, 1, 2, 2-Tetrachloroethane	1 1	U
	1,2-Dibromoethane		_
108-88-3		1 1	. 1
	Chlorobenzene		_
	Ethylbenzene		Ü
100-42-5	<b>_</b> .	<del></del>	_
	Styrene Xylenes (total)		
541-70 4	xyrenes (total)	1 1	
10/ 4/ 7	1,3-Dichlorobenzene	1	U
100-46-/	1,4-Dichlorobenzene		
73-30-1	1,2-Dichlorobenzene	_ 1 1	
76-12-8	1,2-Dibromo-3-chloropropane		U
17/1-07-1	1,2,4-Trichlorobenzene	1 1	U

11.54 LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE 10

: EDCJ4

Lab Name: ENVIROSYSTEMS

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030920

Date Received: 03/18/00

Lab File ID: 030920

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

CONCENTRATION (110/()

<del>-</del>		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	C
74 07 0		1	
74-87-3	Chloromethane	1 1	
/4-83-9	Bromomethane	1 1	
/5-01-4	Vinyl chloride	1 1	
75-00-3	Chloroethane	. 1 1	
75-09-2	Methylene chloride		
57-64-1	Acetone	5 1	_
75-15-0	Carbon disulfide	1 1	
75-35-4	1,1-Dichloroethene	1 1	
75-34-3	1,1-Dichloroethane	1 1	
156-59-2	cis-1,2-Dichloroethene	.1 1	U
156-60-5	trans-1,2-Dichloroethene	.1 1	U
	Chloroform	.: 1 :	U
107-06-2	1,2-Dichloroethane	1 1	U
78-93-3	2-Butanone	1 5 1	U
74-97-5	Bromochloromethane	1 1	U
71-55-6	1,1,1-Trichloroethane	1 1	U
56-23-5	Carbon tetrachloride	1 1	U
75-27-4	Bromodichloromethane	1 1	U
78-87-5	1,2-Dichloropropane	1 1	U
10061-01-5	cis-1,3-Dichloropropene	1 1	U
79-01-6	Trichloroethene	1 (	U
124-48-1	Dibromochloromethane	1 (	Ų
79-00-5	1,1,2-Trichloroethane	1 1	U
71-43-2	Benzene	1 1	U
10061-02-6	trans-1,3-Dichloropropene	1 :	U
75-25-2	Bramoform_	1 1	Ú
108-10-1	4-Methyl-2-pentanone	5 ;	
591-78-6	2-Hexanone	5 :	U
127-18-4	Tetrachloroethene	1 1	_
79-34-5	1, 1, 2, 2-Tetrachloroethane	1 1 1	Ū
106-93-4	1,2-Dibromoethane	1 1	
108-88-3	Toluene		U
108-90-7	Chlorobenzene		
100-41-4	Ethylbenzene	1 1	
100-42-5	Styrene	1 1	_
1330-20-7-~-	Xylenes (total)	<del>.</del>	U
541-73-1	1,3-Dichlorobenzene	-	U
106-46-7	1, 4-Dichlorobenzene	1 1	
25~50~1~~~	1, 2-Dichlorobenzene	_	U
75 50=1	1,2-Dichlorobenzene		
100-00 4	1, 2-Diviono-3-chioropropane		
120-02-1	1, 2, 4-Trichlorobenzene	1 1	U

EFA SAMFLE NO

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No. 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 00030920

Date Received: 03/18/00

Lab File ID: 030920

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1 0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 0

1			;		!		}	EST. CONC.	;		ì
;	CAS	NUMBER	;	COMPOUND NAME	1	RT :	i	(ug/L)	1	Ø.	;
1 =	=====	=======	= ; =		; =	=======	; =	=======================================	; =	====	1
			_		١.		; _		;_		ì

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LOW LONG WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

DIF BUNNACE ARE

EDCJ5

Lab Name: ENVIROSYSTEMS

Contract. 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 00030921

Date Received:

03/18/00

Lab File ID:

030921

Date Analyzed: 03/22/00

Purge Volume:

25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m) CONCENTRATION CAS NO. COMPOUND Q. (ug/L) 54287 1 74-87-3-----Chloromethane\_\_\_\_ 1 : 0 1 74-83-9----Bromomethane\_\_\_\_\_ 1 10 : 75-01-4-----Vinyl chloride\_\_\_\_\_ 1 10 : 75-00-3-----Chloroethane\_\_\_\_ 1 | U | 75-09-2----Methylene chloride\_\_\_ 2 10 : 67-64-1-----Acetone\_ 5 IU | 75-15-0-----Carbon disulfide\_\_ 1 | U | 75-35-4----1,1-Dichloroethene\_ 1 ! U 1 75-34-3-----1, 1-Dichloroethane 7 : 1 156-59-2----cis-1, 2-Dichloroethene\_\_\_\_ 0.51J 1 156-60-5----trans-1, 2-Dichloroethene\_\_\_\_ 1 10 1 67-66-3-----Chloroform\_\_ 1 10 107-06-2----1,2-Dichloroethane\_\_\_\_ 0.71J 1 78-93-3-----2-Butanone\_\_\_\_ 5 1U : 74-97-5-----Bromochloromethane\_ 1 10 | 71-55-6----1,1,1-Trichloroethane\_\_\_\_ 1 10 | 56-23-5-----Carbon tetrachloride\_\_\_\_ 1 10 1 75-27-4----Bromodichloromethane\_ 1 ;U 1 78-87-5-----1, 2-Dichloropropane\_\_\_\_ 1 : U 1 10061-01-5----cis-1,3-Dichloropropene\_\_\_\_ 1 10 : 79-01-6-----Trichloroethene\_\_ 1 10 1 124-48-1-----Dibromochloromethane\_\_\_ 1 10 1 79-00-5----1,1,2-Trichloroethane\_\_\_\_ 1 10 : 71-43-2----Benzene\_\_\_\_ 0.41J 10061-02-6----trans-1,3-Dichloropropene 1 :0 75-25-2----Bromoform\_\_\_ 1 | U 108-10-1----4-Methyl-2-pentanone\_\_\_\_ 5 10 591-78-6----2-Hexanone\_\_\_ 5 IU 1 127-18-4----Tetrachloroethene\_ 1 :U 1 79-34-5----1, 1, 2, 2-Tetrachloroethane\_\_\_ 1 ; U | 106-93-4----1, 2-Dibromoethane\_\_\_\_ 1 10 108-88-3----Toluene\_\_\_\_ 1 (U 108-90-7-----Chlorobenzene\_\_\_\_ 1 | U ! 100-41-4----Ethylbenzene\_\_\_\_ 1 10 1 100-42-5----Styrene\_\_ 1 10 1330-20-7-----Xylenes (total)\_\_\_ 1 10 | 541-73-1----1,3-Dichlorobenzene\_\_\_\_ 1 10 106-46-7----1, 4-Dichlorobenzene 95-50-1----1, 2-Dichlorobenzene 1 10 : 95-50-1-----1, 2-Dichlorobenzene\_ 1 10 | 96-12-8-----1,2-Dibromo-3-chloropropane\_\_; 1 30 120-82-1-----1, 2, 4-Trichlorobenzene\_\_\_\_\_ 1 | U

1.00

프리슈 공급해워 스피스 다리

LOW CONC. WATER VOLATILE BROANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDCU5

Lab Name: ENVIROSYSTEMS

Contract: 58-D7-0005 |

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No. EDCJ8

Lab Sample ID: 00030921

Date Received. 03/18/00

Lab File ID: 030921

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor 1 0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: O

LÜW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDCU8

Lab Name, ENVIROSYSTEMS

Contract 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 00030902

Date Received:

03/17/00

Lab File ID:

030902

Date Analyzed:

03/22/00

Purge Volume:

25.00 (m1)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

CONCENTRATION

CAS NO. COMPOUND Œ (ug/L) 1 74-87-3-----Chloromethane\_ 1 (U 1 74-83-9-----Bromomethane\_\_ 1 10 : 75-01-4-----Vinyl chloride\_\_\_ 1 | U 1 75-00-3-----Chloroethane\_\_\_ 1 (U | 75-09-2----Methylene chloride\_ 2:0 67-64-1----Acetone\_\_\_ 5 10 75-15-0----Carbon disulfide\_ 1 10 | 75-35-4----1,1-Dichloroethene\_ 1 10 1 75-34-3----1,1-Dichloroethane 1 10 1 156-59-2----cis-1, 2-Dichloroethene\_\_ 1 10 1 156-60-5----trans-1, 2-Dichloroethene\_\_\_ 1 !U : 67-66-3-----Chloroform 1 10 107-06-2----1,2-Dichloroethane\_\_ 1 10 78-93-3----2-Butanone\_\_\_\_ 5 :U : 74-97-5-----Bromochloromethane\_\_ 1 (U : 71-55-6----1, 1, 1-Trichloroethane\_\_\_\_ 1 10 | 56-23-5----Carbon tetrachloride 1 10 1 75-27-4-----Bromodichloromethane 1 10 | 78-87-5----1, 2-Dichloropropane\_\_\_\_ 1 !U : 10061-01-5----cis-1,3-Dichloropropene\_\_\_ 1 10 | 79-01-6----Trichloroethene\_\_\_\_ 1 10 | 124-48-1-----Dibromochloromethane\_ 1 10 1 79-00-5-----1, 1, 2-Trichloroethane\_\_\_\_ 1 10 | 71-43-2----Benzene\_\_ 1 10 10061-02-6----trans-1,3-Dichloropropene\_\_\_ 1 10 1 75-25-2----Bromoform 1 (U 5 10 i 108-10-1----4-Methyl-2-pentanone\_\_\_\_ 591-78-6----2-Hexanone\_\_\_\_ 5 (U | 127-18-4-----Tetrachloroethene\_ 1 10 1 79-34-5----1, 1, 2, 2-Tetrachloroethane\_\_\_\_ 1 | U 106-93-4----1,2-Dibromoethane\_\_\_\_ 1 10 108-88-3----Toluene\_\_\_ 1 10 108-90-7----Chlorobenzene\_\_\_\_ 1 : U | 100-41-4----Ethylbenzene\_\_\_\_ 1 !U 100-42-5----Styrene\_\_\_\_ 1 IU | 1330-20-7-----Xylenes (total)\_ 1 : U 541-73-1----1,3-Dichlorobenzene\_\_\_\_ 1 | U 1 106-46-7----1, 4-Dichlorobenzene\_\_\_\_ 1 10 95-50-1----1, 2-Dichlorobenzene\_\_\_\_ 1 !U 96-12-8----1, 2-Dibromo-3-chloropropane\_\_ 1 (U 120-82-1----1, 2, 4-Trichlorobenzene\_\_\_\_ 1 !U

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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEE!"

TENTATIVELY IDENTIFIED COMPOUNDS

EDCJB

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005 |\_\_\_

- 표위적 - 표측께단도로 - 제신

Lab Code: ENVSYS Case No. 27876 SAS No.:

SDG No.: EDCJB

Lab Sample ID: 00030902

Date Received: 03/17/00

Lab File ID: 030902

Date Analyzed. 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1 0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: O

CAS NUMBER : COMPOUND NAME : RT : (ug/L) : Q : 

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

: EDCJ9

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030922

Date Received: 03/18/00

Lab File ID: 030922

Date Analyzed: 03/22/00

Purge Valume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

CONCENTRATION

CAS NO.	COMPOUND SYSSTR	(ug/L) Q
74-87-3	Chloromethane	1 { 1 {U
74-83-9	Bromomethane	1 10
75-01-4	Vinyl chloride	1 10
75-00-3	Chloroethane	1 10
75-09-2	Methylene chloride	2 10
67-64-1	Acetone	5 10
75-15-0	Carbon disulfide	1 1 1
75-35-4	1,1-Dichloroethene	1 10
75-34-3	1,1-Dichloroethane	7 1
156-59-2	cis-1, 2-Dichloroethene	0.5IJ
156-60-5	trans-1, 2-Dichloroethene	1 10
67-66-3	Chloroform	1 10
107-04-2	1,2-Dichloroethane	1 10
78-93-3	2-Butanone	5 10
74-97-5	Bromochloromethane	1 10
71-55-6	1,1,1-Trichloroethane	1 10
56-23-5	Carbon tetrachloride	1 1 1
75-27-4	Bromodichloromethane	_ i i i i i i i i i i i i i i i i i i i
78-87-5	1, 2-Dichloropropane	i
10061-01-5	cis-1,3-Dichloropropene	1 10
79-01-6	Trichloroethene	1 10
124-48-1	Dibromochloromethane	1 10
79-00-5	1, 1, 2-Trichloroethane	1 10
71-43-2	Benzene	0.41
10061-02-6	trans-1,3-Dichloropropene	1 1 10
75-25-2	Bromoform	1 0
108-10-1	4-Methy1-2-pentanone_	5 10
591-78-6	2-Hexanone	5 10
127-18-4	Tetrachloroethene	1 10
79-34-5	1, 1, 2, 2-Tetrachloroethane	1 10
106-93-4	1, 2-Dibromoethane	1 10
108-88-3	Toluene	1 10
108-90-7	Chlorobenzene	i i i
100-41-4	Ethylbenzene	1 10
100-42-5		1 10
	Xylenes (total)	1 10
	1,3-Dichlorobenzene	
	1, 4-Dichlorobenzene	1 10
	1, 2-Dichlorobenzene	1 10
		<del></del>
94-19-9	1 7-11,65000-2-66,6500000000	
	1,2-Dibromo-3-chloropropane_ 1,2,4-Trichlorobenzene	<del></del>

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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

ab Name ENVIROSYSTEMS

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030922

Date Received: 03/18/00

Lab File ID: 030922

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 0

EST. CONC. :

CAS NUMBER : COMPOUND NAME : RT : (ug/L) : Q : 

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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDCKO

Lab Name ENVIROSYSTEMS

Contract 88-D7-0005 :\_\_

Lab Code: ENVSYS Case No.: 27876 SAS No.: 5DG No.: EDCUB

TEMA SAMPLE NI

Lab Sample ID. 00030903

Date Received: 03/17/00

Lab File ID. 030903

Purge Volume: 25,00 (ml)

Date Analyzed: 03/22/00

Dilution Factor: 1 0

GC Column: RTX 502.2 | ID: 0 530 (mm) | Length: 105 (m) | CONCENTRATION

			CONCENTRATION	
	CAS NO.	COMPOUND 54271	(0g/L)	0
!	74-87-3	-Chloromethane	•	f i
i	74-83-9	Bromomethane	1 1 1	
;	75-01-4	-Vinyl chloride	1 1	
,	75-00-3	-Chloroethana	1 1	
:	75-09-2	-Chloroethane -Methylene chloride	2 1	
•	67-64-1	-Acetone	5 ;	
:	75-15-0	-Carbon disulfide	1 1	
1	75-35-4	-1,1-Dichloroethene	1 1	•
;	75-34-3	-1, 1-Dichloroethane	0 6	_
;	156-59-2	-cis-1, 2-Dichloroethene	1 1 1	
•	156-40-5	-trans-1, 2-Dichloroethene	1 1	
;	67-66-3	-Chloroform	1 1	
,	107~04-2	-1,2-Dichloroethane	1 1	
į	78-93-3	-2-Butanone	5 1	
•	74-97-5	-Bromochloromethane	1 1	
•	71-55-4	-1, 1, 1-Trichloroethane	1 1	
1	54-22-5	Carbon tetrachloride	1 1	
,	75-27-4	-Bromodichloromethane	1 1	
,	70-07-5	1 2 Distinguishing	1 1	-
,	10041-01-5-	-1,2-Dichloropropane	1 1	
	70-01-01-3	-cis-1,3-Dichloropropene	1	
1	174-40	-Trichloroethene		
1	70-00 5	-Dibromochloromethane	1	
,	77-00-5	-1, 1, 2-Trichloroethane		
1	10011 00 1	-Benzene	1	
1	75 25 0	-trans-1,3-Dichloropropene	1	-
i	/5-25-2	-Bromoform_	1 1	
i	108-10-1	-4-Methyl-2-pentanone	5	
i	591-/8-6	-2-Hexanone	5	
i	12/-18-4	-Tetrachloroethene	1	
;	/9-34-5	-1, 1, 2, 2-Tetrachloroethane	1	
i	106-93-4	1,2-Dibromoethane	1	
i	108-88-3	Toluene	1 1	
;	108-90-7	-Chlorobenzene		
i	100-41-4	-Ethylbenzene	1 1	U
i	100-42-5			U
ì	1330-20-7	Xylenes (total)		U
1	541-73-1	1,3-Dichlorobenzene	1	U
1	106-46-7	1,4-Dichlorobenzene	1	· U
;		1,2-Dichlorobenzene	1	U
1		1,2-Dibromo-3-chloropropane		U
1	120-82-1	1,2,4-Trichlorobenzene	1	U
:		<del></del>	1	

18W CONC WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDCK1

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No. EDCJ8

Lab Sample ID 00030904 Date Received: 03/17/00

Lab File ID: 03/22/00

Purge Volume: 25,00 (ml) Dilution Factor, 1.0

			CONCENTRATION	
	CAS NO.	COMPOUND 54253	(ug/L)	Q
;			1	;
1	74-87-3	Chlaromethane	1 :	U ;
1	74-83-9	Bromòmethane	1 1	U :
1	75-01-4	Vinyl chloride	1 1	U ;
1	75-00-3	Chloroethane	1 1	U :
;	75-09-2	Methylene chloride	2 :	U :
ŧ	67-64-1	Acetone	5 :	U ;
1	75-15-0	Carbon disalfide	1 1	U :
;	75-35-4	1,1-Dichlordethene	1 ;	U :
ŧ	75-34-3	1,1-Dichloroethane	1 1	υ :
ļ	156-59-2	cis-1,2-Dichloroethene	1 1	U :
;	156-60-5	trans-1,2-Dichloroethene	1 ;	U :
;	67-66-3	Chloroform_		Ü :
ŀ	107-06-2	1,2-Dichloroethane	0.61	
!		2-Butanone	5	
;	74-97-5	Bromochloromethane_	1 1	_
;	71-55-6	1, 1, 1-Trichloroethane	1	_
1		Carbon tetrachloride	1 1	_
•	75-27-4	Bromodichloromethane	1 1	
į	78-87-5	1, 2-Dichloropropane	1 1	
1	10061-01-5	cis-1, 3-Dichloropropene	1 1	
!	79-01-6	Trichloroethene	1 1	
į	124-48-1	Dibromochloromethane	1 1	
į	79-00-5	1,1,2-Trichloroethane	1 ;	_
	71-43-2	Benzene	1	
•		trans-1,3-Dichloropropene	1	
•	75-25-2		1	
•	108-10-1	4-Methyl-2-pentanone	5	
į	591-78-4	2-Hexanone	5 ;	
÷	127-18-4	Tetrachloroethene	1 1	
1	79-34-5	1, 1, 2, 2-Tetrachloroethane	1 1	
,	104-92-4	1, 2-Dibromoethane	`	_
1	100-73-4	Toluene	1	U :
	100-00-7	Chlorobenzene	\	
ı	100-70-7	Chiorobenzene	\	IU :
i	100-42-5		1 1	
•	1330-20-/	Xylenes (total)	_	100
i	341-/3-1	1,3-Dichlorobenzene	<del>-</del>	
i	106-46-/	1, 4-Dichlorobenzene		
;	77-70-1	1, 2-Dichlorobenzene		IU \
	76-12-8	1,2-Dibromo-3-chloropropane		! U . !
-	120-82-1	1,2,4-Trichlorobenzene	1	: U
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS | Case No.: 27876 | SAS No.:

SDG No - EDCUB

Lab Sample ID: COO30903

Date Received: 03/17/00

Lab File ID: 030903

Date Amalyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0 530 (mm) Length: 105 (m)

Number TICs found: 0

ļ			 		}		EST.	CONC.	1		ì
ì	CAS I	NUMBER	COMPOUND	NAME	; R	T :	(ug	/L)	;	Q	i
!		=======	=======================================		====	====;	======	======	;==	===	1
ŧ			l		·	<del></del> ;					;

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LOW CONC WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

L EDCK1

Lab Name: ENVIROSYSTEMS

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJB

Lab Sample ID: 00030904

Date Received: 03/17/00

Lab File ID: 030904

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

CONCENTRATION

CAS ND.	COMPOUND 54263	(ug/L)	G
74-87-3	Chloromethane	1 11	
74-83-9	Bromomethane	1 11	J
75-01-4	Vinyl chloride	1 1	J
75-00-3	Chloroethane	1 11	J
75-09-2	Methulene chloride	1 2 11	_
67-64-1	Acetone Carbon disulfide	5 11	J
75-15-0	Carbon disulfide	1 1	_
75-35-4	1,1-Dichloroethene	1 11	ز
75-34-3	1,1-Dichloroethane	1 11	J
156-59-2	cis-1,2-Dichloroethene	1 11	<i>.</i>
156-60-5	trans-1,2-Dichloroethene	1 17	)
67-66-3	Chloroform	1 13	)
107-06-2	1,2-Dichloroethane	0.61	j
78-93-3	2-Butanone	5 10	J
74-97-5	Bromochloromethane	1 11	ر
71-55-6	1,1,1-Trichloroethane	1 11	J
56-23-5	Carbon tetrachloride	1 11	J
75-27-4	Bromodichloromethane	1 11	J
78-87-5	1,2-Dichloropropane	1 11	J
10061-01-5	cis-1,3-Dichloropropene	1 11	U
79-01-6	Trichloroethene	1 1	U
124-48-1	Dibromochloromethane	1 1	U
79-00-5	1,1,2-Trichloroethane	1 1	U
71-43-2	Benzene	1 1	U
10061-02-6	trans-1,3-Dichloropropene	1 1	U
75-25-2	Bromoform	1 :	U
108-10-1	4-Methyl-2-pentanone	; 5 ;	U
591-78-6	2-He xanone	5 ;	IJ
127-18-4	Tetrachloroethene	1 1	U
79-34-5	1,1,2,2-Tetrachloroethane	1 1	U
106-93-4	1,2-Dibromoethane	1 1	
108-88-3	Toluene	1 1	
108-90-7	Chlorobenzene		
	Ethylbenzene	1 1	U
100-42-5		1 1	
	Xylenes (total)	•	Ū
	1,3-Dichlorobenzene	•	Ũ
	1, 4-Dichlorobenzene		Ū
	1, 2-Dichlorobenzene	•	Ū
	1,2-Dibromo-3-chloropropane		Ū
	1, 2, 4-Trichlorobenzene	1 1	

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123A ERA SAMPLE NO LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET EDCKO Lab Name ENVIROSYSTEMS Lab Code: ENVSYS Case No. 27876 SAS No.: SDG No. EDCUS Lab Sample ID.\00030903 Date Received 03/17/09 Lab File ID: 030703 03/22/00 Date Analyzed: Purge Volume: 25 00 Dilution Factor: 1 0 (m1) GC Column: RTX 502.2 TD: 0 530 (mm) Length: 105 (m) CONCENTRATION CAS NO. COMPOUND 54271 (09/11) : 74-87-3-----Chlotomethane\_ 1 :U 1 74-83-9-----Bromomethane\_\_ 1 : 0 1 75-01-4-----Vinyl c\langle loride\_ 1 : U : 75-00-3-----Chloroetkane\_ : U : 75-09-2----Methylene\chloride\_ Ξ 10 | 57-64-1----Acetone\_ 5 IU 75-15-0-----Carbon disuNfide\_ 1 (U 75-35-4----1,1-Dichloroethene 1. IU 75-34-3----1, 1-Dichloroetkane 0 610 | 156-59-2----cis-1,2-Dichloraethene\_ 1 10 1 ; U 156-60-5-----trans-1,2-Dichloroethene 1 \U | 67-66-3-----Chloroform 107-06-2----1,2-Dichloroethane 1 SU 5 10 78-93-3-----2-Butanone 74-97-5----Bromochloromethane\_ 1 : U | 71-55-6----1,1,1-Trichloroethane\_ 10 56-23-5----Carbon tetrachloride\_ 10 75-27-4----Bromodichloromethane : U | 78-87-5-----1,2-Dichloropropane\_\_ : U : 10061-01-5----cis-1,3-Dichloropropene\_ : U 79-01-6----Trichloroethene\_\_ 1.0 ĭ 124-48-1----Dibromochloromethane : U 79-00-5-----1,1,2-Trichloroethane\_\_\_ 10 71-43-2----Benzene : 0 10061-02-6----trans-1,3-Dichloropropene\_ 10 7 75-25-2----Bromoform\_\_ -10 | 108-10-1-----4-Methyl-2-pentanone\_\_ - 10 591-78-6----2-Hexanone\_\_\_ 5 10 10 127-18-4-----Tetrachloroethene\_ 79-34-5----1,1,2,2-Tetrachloroethane\_ 1 IU  $; \cup$ 106-93-4----1,2-Dibromoethane\_\_ 108-88-3----Toluene :U 108-90-7-----Chlorobenzene\_\_\_\_ 100-41-4----Ethylbenzene\_\_\_\_ : Ø | 100-42-5----Styrene\_\_\_ 10 | 1330-20-7----Xylenes (total)\_\_\_ ÷υ 541-73-1----1,3-Dichlorobenzene\_\_ 10 106-46-7-----1, 4-Dichlorobenzene HU 95-50-1----1, 2-Dichlorobenzene\_\_\_ U 96-12-8----1,2-Dibromo-3-chloropropane\_ -10

120-82-1----1, 2, 4-Trichlorobenzene\_\_\_\_

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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

. EPA SAMPLE NO

: EDCK1

Lab Name. ENVIROSYSTEMS

Contract: 68-D7-0005 | \_\_\_\_

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030904

Date Received: 03/17/00

Lab File ID: 030904

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 0

EST. CONC. : : CAS NUMBER : COMPOUND NAME : RT : (ug/L) : Q :

LOW CONC WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

| EDCK2

Lab Name: ENVIROSYSTEMS Contract 48-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCUB

Lab Sample ID: 00030905

Date Received: 03/17/00

Lab File ID: 030905

Date Analyzed 03/22/00

Purge Volume: 25 00 (ml)

Dilution Factor: 1.0

CONCENTRATION

CAS NO.	COMPOUND	(ug/L)	G.
74-87-3	Chloromethane	1 1	J
74-83-9	Bromomethane	1 11	J
75-01-4	Vinyl chloride	0.71	ل
75-00-3	Chloroethane	1 11	ر
75-09-2	Methulene chloride	2 11	ر
67-64-1	Acetone	5 10	
75-15-0	Carbon disulfide	1 1	_ J
75-35-4	1,1-Dichloroethene	1 11	_
75-34-3	1,1-Dichloroethane	2 (	
156-59-2	cis-1,2-Dichloroethene	1 /1	
156-60-5	trans-1,2-Dichloroethene	1 1	*
67-66-3	Chloroform	1 (1	
107-06-2	1,2-Dichloroethane	1 1	-
78-93-3	2-Butanone	5 11	
74-97-5	Bromochloromethane	1 11	
71-55-6	1, 1, 1-Trichloroethane	1 1	
56-23-5	Carbon tetrachloride	1 1	
: 75-27-4	Bromodichloromethane	_ `	_
78-87-5	1, 2-Dichloropropane	1 11	-
10061-01-5	cis-1, 3-Dichloropropene		
: 79-01-6	Trichloroethene	1 1	
! 124-48-1	Dibromochloromethane	1 1	
127 70 1	1, 1, 2-Trichloroethane	1 (1	=
1 71-43-2	Benzene	-'   1   1   1	
10061-02-6	trans-1,3-Dichloropropene	- ' ' - ' - ' - ' - ' - ' - ' - ' -	
: 75-25-2	Bromoform	1 1	-
! 108-10-1	4-Methyl-2-pentanone	_' 	
: 591-79-4		~; 5 ;	_
127-18-4	2-Hexanona Tetrachloroethene	1 (	_
1 79-34-5	1, 1, 2, 2-Tetrachloroethane	1	
	1, 2-Dibromoethane		
100-73-4	Toluene	1	
1 100-00-3	Chlorobenzene	- '	
	Ethylbenzene	- i i i	
		-	
100-42-5		1 1	
	Xylenes (total)	_	
	1,3-Dichlorobenzene	_	
	1, 4-Dichlorobenzene	_	-
	1,2-Dichlorobenzene		U
	1,2-Dibromo-3-chloropropane_		U
120-82-1	1, 2, 4-Trichlorobenzene	_	U
·		-, <del></del>	

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EPA SAMPLE NO

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDCK2

Lab Name: ENVIROSYSTEMS

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJB

Lab Sample ID: 00030905

Date Received: 03/17/00

Lab File ID: 030905

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 2

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								_
!		1	!		EST.	CONC	1	;
;	CAS NUMBER	COMPOUND NAME	;	RT	; (ug	/L)	; Q	1
:=:		=	= ; =:	======		======	-   =====	= ;
;	1. 75-43-4	METHANE, DICHLOROFLUORO-	1	6, 20	1	3	: JN	!
1	2. ·	! UNKNOWN	1	7. 27	<b>†</b>	4	;J	;
!	·.		_		1	·····	_	_;

11174

LOW CONC. WATER VOLATILE URGANICS ANALYSIS DATA SHEET

EFA BAMPLE NO

EDCK3

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005 :\_

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No : EDCJB

Lab Sample ID: 00030906

Date Received: 03/17/00

Lab File ID: 030906

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

CONCENTRATION

	CAS NO.	COMPOUND 5475	(ug/L)	Q
74-83-9	; : 74-87-3	Chloromethane	1	} }U
75-01-4	74-83-9	Bromomethane		
75-00-3	75-01-4	Vinul chloride		
75-09-2Methylene chloride	1 75-00-3	Chloroethane		
67-64-1Acetone	75-09-2	Methulene chloride	=	_
75-15-0	67-64-1	Acetone		
75-35-4	75-15-0	Carbon disulfide	1	
75-34-3	75-35-4	1, 1-Dichloroethene	1	ΙŪ
156-59-2	75-34-3	1,1-Dichloroethane	1	ΙÜ
156-60-5	156-59-2	cis-1,2-Dichloroethene	1	: U
67-66-3	156-60-5	trans-1,2-Dichloroethene	1	ŧŪ
107-06-2	67-66-3	Chloroform	1	łŪ
78-93-32-Butanone       5 ! U         74-97-5Bromochloromethane       1 ! U         71-55-61, 1, 1-Trichloroethane       1 ! U         56-23-5	107-06-2	1,2-Dichlornethane	1	
74-97-5	78-93-3	2-Butanone	5	
71-55-61, 1, 1-Trichloroethane       1   U         56-23-5Carbon tetrachloride       1   U         75-27-4Bromodichloromethane       1   U         78-87-51, 2-Dichloropropane       1   U         10061-01-5cis-1, 3-Dichloropropene       1   U         79-01-6Trichloroethane       1   U         79-00-51, 1, 2-Trichloroethane       1   U         71-43-2Benzene       1   U         10061-02-6Bromoform       1   U         109-10-1	74-97-5	Bromochloromethane		
56-23-5	71-55-6	1.1.1-Trichlorgethane		
75-27-4Bromodichloromethane       1         78-87-51, 2-Dichloropropane       1         10061-01-5cis-1, 3-Dichloropropene       1         124-48-1Trichloroethene       1         124-48-1Dibromochloromethane       1         127-00-51, 1, 2-Trichloroethane       1         127-43-2Benzene       1         12061-02-6trans-1, 3-Dichloropropene       1         127-25-2Bromoform       1         128-10-1	56-23-5	Carbon tetrachloride		
78-87-51, 2-Dichloropropane       1         10061-01-5cis-1, 3-Dichloropropene       1         79-01-6Trichloroethene       1         124-48-1Dibromochloromethane       1         17-00-51, 1, 2-Trichloroethane       1         17-43-2Benzene       1         10061-02-6trans-1, 3-Dichloropropene       1         1007-25-2	75-27-4	Bromodichloromethane		_
1   0   10061-01-5cis-1, 3-Dichloropropene   1   0   179-01-6Trichloroethene   1   0   124-48-1Dibromochloromethane   1   0   179-00-51, 1, 2-Trichloroethane   1   0   10061-02-6trans-1, 3-Dichloropropene   1   0   10061-02-6Bromoform   1   0   108-10-14-Methyl-2-pentanone   5   0   127-18-42-Hexanone   5   0   127-18-41, 1, 2, 2-Tetrachloroethane   1   0   106-93-41, 1-2-Dibromoethane   1   0   108-88-3	78-87-5	1. 2-Dichloropponane	_	_
79-01-6Trichloroethene       1         124-48-1Dibromochloromethane       1         79-00-51, 1, 2-Trichloroethane       1         71-43-2Benzene       1         10061-02-6trans-1, 3-Dichloropropene       1         75-25-2Bromoform       1         108-10-14-Methyl-2-pentanone       5         591-78-62-Hexanone       5         127-18-4	10061-01-5-	cis-1.3-Dichloropropene	1	
124-48-1	79-01-6	Trichloroethene	1	_
79-00-51, 1, 2-Trichloroethane       1         71-43-2Benzene       1         10061-02-6trans-1, 3-Dichloropropene       1         75-25-2Bromoform       1         108-10-14-Methyl-2-pentanone       5         591-78-62-Hexanone       1         127-18-4Tetrachloroethene       1         79-34-51, 1, 2, 2-Tetrachloroethane       1         108-88-3Toluene       1         108-90-7Chlorobenzene       1         100-41-4Ethylbenzene       1         1330-20-7Xylenes (total)       1         541-73-11, 3-Dichlorobenzene       1         106-46-71, 2-Dichlorobenzene       1         106-12-81, 2-Dibromo-3-chloropropane       1	124-48-1	Dibromochloromethane	1	
71-43-2Benzene       1         10061-02-6trans-1,3-Dichloropropene       1         75-25-2Bromoform       1         108-10-14-Methyl-2-pentanone       5         591-78-62-Hexanone       5         127-18-4	79-00-5	1.1.2-Trichloroethane	1	_
10061-02-6trans-1,3-Dichloropropene	71-43-2	Renzene	<del>-</del>	-
75-25-2	10061-02-6-	trans-1.3-Dichloronronene		
108-10-14-Methyl-2-pentanone	: 75-25-2	Brossform		_
591-78-62-Hexanone	! 108-10-1		_	
127-18-4Tetrachloroethene       1         79-34-51, 1, 2, 2-Tetrachloroethane       1         106-93-41, 2-Dibromoethane       1         108-88-3Toluene       1         108-90-7Chlorobenzene       1         100-41-4Ethylbenzene       1         100-42-5Styrene       1         1330-20-7Xylenes (total)       1         541-73-11, 3-Dichlorobenzene       1         106-46-71, 4-Dichlorobenzene       1         95-50-11, 2-Dichlorobenzene       1         96-12-81, 2-Dibromo-3-chloropropane       1	1 591-78-4			
79-34-51, 1, 2, 2-Tetrachloroethane       1 IU         106-93-41, 2-Dibromoethane       1 IU         108-88-3Toluene       1 IU         108-90-7Chlorobenzene       1 IU         100-41-4Ethylbenzene       1 IU         100-42-5Styrene       1 IU         1330-20-7Xylenes (total)       1 IU         541-73-11, 3-Dichlorobenzene       1 IU         106-46-71, 4-Dichlorobenzene       1 IU         95-50-11, 2-Dichlorobenzene       1 IU         96-12-81, 2-Dibromo-3-chloropropane       1 IU	! 127-18-4	Totaschlonosthono	_	-
106-93-41, 2-Dibromoethane       1         108-88-3Toluene       1         108-90-7Chlorobenzene       1         100-41-4Ethylbenzene       1         100-42-5Styrene       1         1330-20-7Xylenes (total)       1         541-73-11, 3-Dichlorobenzene       1         106-46-71, 4-Dichlorobenzene       1         95-50-11, 2-Dichlorobenzene       1         96-12-81, 2-Dibromo-3-chloropropane       1	127 10		<del>-</del>	_
108-88-3Toluene       1 :U         108-90-7Chlorobenzene       1 :U         100-41-4Ethylbenzene       1 :U         100-42-5Styrene       1 :U         1330-20-7Xylenes (total)       1 :U         541-73-11, 3-Dichlorobenzene       1 :U         106-46-71, 4-Dichlorobenzene       1 :U         95-50-11, 2-Dichlorobenzene       1 :U         96-12-81, 2-Dibromo-3-chloropropane       1 :U	! 104-93-4	1 7-Dibrerestbare		
108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U	! 108-88-3	Tolueno	1	
100-41-4Ethylbenzene       1 :U         100-42-5Styrene       1 :U         1330-20-7Xylenes (total)       1 :U         541-73-11, 3-Dichlorobenzene       1 :U         106-46-71, 4-Dichlorobenzene       1 :U         95-50-11, 2-Dichlorobenzene       1 :U         96-12-81, 2-Dibromo-3-chloropropane       1 :U	100 00 3	Chloratenas	<u>.</u>	
1   0   1   0   1   0   1   0   0   0	100 /0 //	Charleng	•	=
1330-20-7Xylenes (total)       1   U         541-73-11, 3-Dichlorobenzene       1   U         106-46-71, 4-Dichlorobenzene       1   U         95-50-11, 2-Dichlorobenzene       1   U         96-12-81, 2-Dibromo-3-chloropropane       1   U	100-41-4	Chuston Englishme	_	
541-73-11, 3-Dichlorobenzene       1   U         106-46-71, 4-Dichlorobenzene       1   U         95-50-11, 2-Dichlorobenzene       1   U         96-12-81, 2-Dibromo-3-chloropropane       1   U				
106-46-71,4-Dichlorobenzene				
95-50-1	1 341-/3-1	i, 3-Dichlorobenzenei		
96-12-81,2-Dibromo-3-chloropropane	105-46-/	1, 4-Dichlorobenzene	_	
1 (U	75-50-1	1, 2-Dichlorobenzene	_	
	76-12-8	1,2-Dibromo-3-chloropropane	-	
120-82-11, 2, 4-Trichlorobenzene1   U	120-82-1	1, 2, 4-Trichlorobenzene	1	; U

1LCE

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDCK3

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005 :

EPA SAMPLE NO

Lab Code: ENVSYS Case No.: 27876 SAS No.: 5DG No.: EDCJ8

Lab Sample ID: 00030906

Date Received: 03/17/00

Lab File ID: 030906

Date Analyzed: 03/22/00

Purge Volume: 25,00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 0 .

COMPOUND NAME   EST. CONC.	
	م
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	=== ;

16.54

LOW CONC WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SEA GAMPLE NO

CONCENTRATION

Lab Name: ENVIROSYSTEMS Contract 68-D7-0005 :

Lab Code: ENVSYS Case No. 27876 SAS No : SDG No EDCJ8

Lab Sample ID: 00030907 Date Received: 03/17/00

Lab File ID: 030907 Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml) Dilution Factor: 1.0

	CAS NO.	COMPOUND @	1220/101	(ug/L)	G
1	74-87-3	Chloromethane	\ \ \	1 4	
ı	74-83-9	Bromomethane	 }	1	
; 1	75-01-4	Vinyl chloride_		1	
-	75-00-3	Chloroethane		1 ;	
1	75-09-2	Methylene chlori	de	2 (	_
;	67-64-1	Acetone	1	5 ;	•
1	75-15-0	Carbon disulfide	!	1 +	-
;	75-35-4	1,1-Dichloroethe	ne	1 }	_
1	75-34-3	1,1-Dichloroetha	ne	0.51	
1	156-59-2	cis-1,2-Dichloro	ethene	0.61	
ļ	156-60-5	trans-1,2-Dichlo	roethene	1 1	
1	67-66-3	Chloroform		0 4	
1	107-06-2	1,2-Dichloroetha	ne :	1 :	
1	78-93-3	2-Butanone		5 }	
1	74-97-5	BromochIorometha	ne	1 1	
í	71-55-6	1,1,1-Trichloroe	thane :	1 :	
;	56-23-5	Carbon tetrachlo	ride :	1 (	Ū t
į i	75-27-4	Bromodichloromet	hane	1 (	Ü :
ķ	78-87-5	1,2-Dichloroprop	ane	1 :	u :
1	10061-01-5-	cis-1,3-Dichloro	propene	÷ .	U i
;	79-01-6	Trichloroethene_		1 :	U :
1	124-48-1	Dibromochloromet	hane	1 :	U i
į	79-00-5	1, 1, 2-Trichloroe	thane	1 ;	U :
1	71-43-2	Benzene		1 :	U :
,	10061-02-6-	trans-1,3-Dichlo	ropropene {	1 :	U :
1	75-25-2	Bromoform		4 4	U ;
1	108-10-1	4-Methyl-2-penta	none	5 ;	U :
1	591-78-6	2-Hexanone		5 }	U :
1	127-18-4	Tetrachloroethen	e:	1 :	U :
1	79-34-5	1, 1, 2, 2-Tetrachl	oroethane:	1 (	U :
1	106-93-4	1,2-Dibromoethan	e:	1 :	U :
i	108-88-3	Toluene		1 1	U :
ţ	108-90-7	Chlorobenzene		1 :	U :
t	100-41-4	Ethylbenzene		1 (	U :
1	100-42-5	Styrene		1 1	U :
ł		Xylenes (total)_		1 :	U I
;	541-73-1	1,3-Dichlorobenz	ene	1 :	U :
;	106-46-7	1, 4-Dichlorobenz	ene	1 ;	U :
;	95-50-1	1, 2-Dichlorobenz	ene	1 1	U !
;	96-12-8	1,2-Dibromo-3-ch	loropropane	i i	
;	120-82-1	1, 2, 4-Ttichlorob	enzene	1 1	U :
:				ı	

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LDW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDCK4

EPA SAMPLE NO

Lab Name: ENVIROSYSTEMS

Lab File ID: 030907

Contract: 68-D7-0005

SDG No.: EDCJ8

Lab Code: ENVSYS Case No.: 27876 SAS No.:

Date Received: 03/17/00

Lab Sample ID: 00030907

Date Analyzed: 03/22/00

Dilution Factor: 1.0

Purge Volume: 25.00 (ml)

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 0

EST. CONC. :

CAS NUMBER : COMPOUND NAME : RT : (ug/L) : Q :

week.

16.14

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

ERA EAMPLE NO

Lab Name: ENVIROSYSTEMS Contract 58-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No : EDCJ8

Lab Sample ID: 00030908

Date Received: 03/17/00

Date Analyzed 03/22/00

Lab File ID: 030908

Purge Volume: 25.00 (ml)

Dilution Factor 1.0

CAS NO.	COMPOUND A 19121	(ug/L)
74-87-3	Chloromethane	1 1
74-83-9	Bromomethane	1 :
75-01-4	Vinul chloride	1 :
75-00-3	Chloroethane	1 :
75-09-2	Methulene chloride	2 !
67-64-1	Acetone	_ ; 5 ;
/3-13-0	Carbon disulfide	1 ;
75-35-4	1,1-Dichloroethene	1
75-34-3	1,1-Dichloroethane	2 :
156-59-2	cis-1,2-Dichloroethene	! 0. B1
156-60-5	trans-1,2-Dichloroethene	1 1 1
67-66-3	Chloroform	1
107-06-2	1,2-Dichloroethane	_ 1 1
78-93-3	2-Butanone	; 5 ;
74-97-5	Bromochloromethane	_; 1 ;
71-55-6	1,1,1-Trichloroethane	_ ; 1 ;
56-23-5	Carbon tetrachloride	_ 1 1
75-27-4	Bromodichloromethane	! 1 ;
/8-87-5	1,2-Dichloropropane	11
10061-01-5	cis-1,3-Dichloropropene	1 1 11
/9-01-6	Trichloroethene	_ 1 :1
124-48-1	Dibromochloromethane	1
/9-00-5	1, 1, 2-Trichloroethane	1 1 1
/1-43-2	Benzene	_ 1 ;
10061-02-6	trans-1,3-Dichloropropene	_ ;
/5-25-2	Bromoform_	
108-10-1	4-Methyl-2-pentanone	
391-/8-6	2-Hexanone	_ 5 ;
12/-18-4	Tetrachloroethene	
/9-34-5	1, 1, 2, 2-Tetrachloroethane	_ ! ! !
	1,2-Dibromoethane	
108-88-3		
108-90-7	Chlorobenzene	_ 1 1
100-41-4	Ethylbenzene	_
100-42-5		_   1
1330-20-/	Xylenes (total)	_
10/ 1/ 7	1,3-Dichlorobenzene	_
	1, 4-Dichlorobenzene	
	1, 2-Dichlorobenzene	
	1, 2-Dibromo-3-chloropropane	
150-85-1	1, 2, 4-Trichlorobenzene	1 1 1

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EPA SAMPLE NO

LOW CONS. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDCK5

Lab Name: ENVIROSYSTEMS Contract 68-D7-0005

Date Received: 03/17/00

Lab Sample ID: 00030708

Date Analyzed: 03/22/00

Lab File ID: 030908

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 2

74:16-1

				<u> </u>	(						_
- ;			1		1		EST.	CONC.	:		- 1
1	CAS	NUMBER	: COMPO	UND NAME	}	RT	: (ug	/L)	f.	G	í
! =	====	=======		========	===;==	=====	;=====	=====	= ; =	===	= ;
1	1.	75-43-4	METHANE, DICH	ILOROFLUORO	;	6. 22	<u> </u>	3	IJ	N	1
;	2.	;	: UNKNOWN		ŧ ŧ	7. 30	4 5	4	1.0	l	1
<b>:</b>		· .	<b>.</b>		!		·		_		_ :

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

1 EDCK6

Lab Name: ENVIROSYSTEMS Contract. 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCUB

Date Received: 03/17/00 Lab Sample ID: 00030909

Lab File ID: 030909 Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml) Dilution Factor: 1 0

			CONCENTRATION	1
CAS N	IO. COMPOUN	ND CHAIR	(ug/L)	G.
: 74-87	/_?Chlance		1	1 1
! 74-B	-3	nethane	i <u>i</u>	{U
1 77 00	-4	ethane	i <u>1</u>	<b>!</b> U
1 75 01	-4	hloride	1 <u>1</u>	10
1 75-00	)-3	ethane	1	{U }
1 /3-09	- 1	ene chloride	i	{ U
1 75 15	-1Acetone			10 1
1 75-15		disulfide	1	
1 75 07	7-41, 1-D1c	hloroethene		
1 /5-34	31, 1-Dic	hloroethane	1	
156-5	9-2c1s-1, 2	2-Dichloroethene	1	: U :
156-6	0-5trans-1	l,2-Dichloroethene		
67-66	,-3Chlorof	orm		10 1
107-0	6-21,2-Dic	hloroethane	1	10 :
78-93	1-32-Butar	none	<del>;</del> 5	: U :
1 74-97	'-5hromoch	loromethane	1	10 :
71-55	5-61, 1, 1-T	Trichloroethane	: 1	: U :
1 56-20	3-5Carbon	tetrachloride	; 1	:U :
1 75-27	'-4Bromodi	ichloromethane	1	: U :
1 78-87	′-51,2-Dic	hloropropane	1	1 U 1
1 1006:	01-5cis-1,C	3-Dichloropropene	1	10 1
1 79-0:	6Trichlo	oroethene	1	10 1
1 124-4	18-1Dibromo	ochloromethane	1	: U :
1 79-00	)-51, 1, 2-7	Trichloroethane	; 1	: U :
71-43	3-2Benzene	2	1	: U :
1 1006	-02-6trans-1	1,3-Dichloropropene	1	!U :
1 75-2	5-2Brownfo	orm	1 1	10
108~	10-14-Methi	y1-2-pentanone	5	10
591-	78-4	none	. 5	10
127~	18-4Tetrack	hloroethene	! 1	U
1 79-34	1-51 1 7 5	2-Tetrachloroethane	1 1	10 :
104-9	77-41 7-Dil	bromoethane	1 1	10 1
1 100-0	70-7T-1	-		
1 100 -	30-3	2	· 1	10 !
1 100~	,	benzene		10
100-	+1-4Ethylbe	enzene	1	10 !
	12-5Styrene			: U
1330	-20-7Xylene	s (total)	1	10
541-	73-11, 3-Die	chlorobenzene	1	10
106-	16-71, 4-Die	chlorobenzene	.; 1	I U
95-5	D-11, 2-Di	chlorobenzene	.1	! U !
96-17	2-81,2-Dil	bromo-3-chloropropane	1	: U
120-6	32-11, 2, 4-	Trichlorobenzene	1	(U)
1			<b>!</b>	:1

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LOW CONG. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

: EDCK6

Lab Name ENVIROSYSTEMS

SDG No.: EDCJ8

Lab Code: ENVSYS Case No.: 27876 SAS No.:

Lab Sample ID: 00030909

Date Received: 03/17/00

Lab File ID: 030909

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 0

EST. CONC. I

: CAS NUMBER 

COMPOUND NAME | RT | (ug/L) | Q |

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

그는 열리 함께워크 스타일 다

D Name ENVIROSYSTEMS Contract 68-D7-0005 (

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030923

Date Received: 03/18/00

Lab File ID: 030923

Date Analyzed: 03/23/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1 0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)
		1
74-87-3	Chloromethane	_ 1 1
74-83-9	Bromomethane	_ 1 _ 1
75-01-4	Vinyl chloride	0.91
75-00-3	Chloroethane	_ 1 11
/5-09-2	Methylene chloride	_
6/-64-1	Acetone	_; 5 ;;
/5-15-0	Carbon disulfide	_
75-35-4	1,1-Dichloroethene	_
75-34-3	1,1-Dichloroethane	_kj mm seems e 3 kj
156-59-2	cis-1,2-Dichloroethene	_;( 2- ; .
156-60-5	trans-1,2-Dichloroethene	_; 1 ;;
67-66-3	Chloroform	_
107-06-2	1,2-Dichloroethane	0.61
78-93-3	2-Butanone	_
74-97-5	Bromochloromethane	1 11
71-55-6	1,1,1-Trichloroethane	1 13
56-23-5	Carbon tetrachloride	1 11
75-27-4	Bromodichloromethane	1 11
78-87-5	1, 2-Dichloropropane	10 ;
10061-01-5	cis-1,3-Dichloropropene	1 11
79-01-6	Trichloroethene	1 11
124-48-1	Dibromochloromethane	1 18
79-00-5	1,1,2-Trichloroethane	1 10
71-43-2	Benzene	0.41
10061-02-6	trans-1,3-Dichloropropene	1 11
75-25-2	Bromoform	1 11
108-10-1	4-Methyl-2-pentanone	_ _\ 5
591-78-6	2-Hexanone	_ _1
127-18-4	Tetrachloroethene	1 11
79-34-5	1, 1, 2, 2-Tetrachloroethane	1 11
106-93-4	1,2-Dibromoethane	1 11
108-88-3	Toluene	1 11
	Chlorobenzene	1 11
100-41-4	Ethylbenzene	_
100-42-5	Sturone	
1330-20-7	V., 1 a - a - ( b - b - 1 )	
541-72-1	1,3-Dichlorobenzene	_
104-14-7-	1,3-Dichioropenzene	
05-50-1-	1, 4-Dichlorobenzene	
75-50-1	1, 2-Dichlorobenzene	_ 1 11
20-15-8	1,2-Dibromo-3-chloropropane_ 1,2,4-Trichlorobenzene_	_; 1 ()

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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EFA SAMPLE NE

EDCK8

Lab Name, ENVIROSYSTEMS

Contract. 48-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJB

Lab Sample ID: 00030923

Date Received: 03/18/00

Lab File ID: 030923

Date Analyzed: 03/23/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 1

: CAS NUMBER

EST. CONC. | COMPOUND NAME | RT | (ug/L) | Q |

UNKNOWN

7, 25 +

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDCK9

Lab Name: ENVIROSYSTEMS Contract 68-D7-0005 |\_\_\_

Lab Code: ENVSYS Case No. 27876 SAS No. . SDG No. EDCJ8

Lab Sample ID: 00030910

Lab File ID: 030910

Date Received: 03/17/00

Date Analyzed. 03/22/00

CONCENTRATION

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

CAS NO.	COMPOUND	(ug/L)	Q	
74-87-3	Chloromethane	_		
74-83-9	Bromomethane	_ 1 10		
75-01-4	Vinyl chloride	1 10		
/5-00-3	Chloroethane	1 (0		
/5-09-2	Methylene chloride	2 10		
67-64-1	Acetone	j 5 (U		
75-15-0	Carbon disulfide	_		
75-35-4	1,1-Dichloroethene	1 [0		
75-34-3	1,1-Dichloroethane	1 10		
156-59-2	cis-1,2-Dichloroethene	1 10		
156-60-5	trans-1,2-Dichloroethene	_1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
67-66-3	Chloroform_	1 10		
107-06-2	1,2-Dichloroethane	_  1    U		
78-93-3	2-Butanone	_		
74-97-5	Bromochloromethane	1 IU		
71-55-6	1,1,1-Trichloroethane	_; 1 ; U		
56-23-5	Carbon tetrachloride	1 10		
75-27-4	Bromodichloromethane	1 (0		
78-87-5	1,2-Dichloropropane	1 10		
10061-01-5	cis-1,3-Dichloropropene	1 10		
79-01-6	Trichloroethene	1 10		
124-48-1	Dibromochloromethane	1 10		
	1,1,2-Trichloroethane			
71-43-2	Benzene	_	ı	
10061-02-6	trans-1,3-Dichloropropene	_   1   U	l	
	Bromoform		I	
	4-Methyl-2-pentanone		!	
591-78-6	2-Hexanone	5 10	I	
127-18-4	Tetrachloroethene_	ī; 1 ; U	i	
	1, 1, 2, 2-Tetrachloroethane		i	
	1,2-Dibromoethane			
108-88-3	Toluene	1 10		
108-90-7	Chlorobenzene	1 10		
100-41-4	Ethylbenzene	1 10		
100-42-5	Sturana	1 10		
	Styrene Xylenes (total)	1 10		
	1,3-Dichlorobenzene	1 1		
	1, 4-Dichlorobenzene	1 10		
		1 10		
	1, 2-Dichlorobenzene	-		
	1, 2-Dibromo-3-chloropropane_			
120-82-1	1, 2, 4 Trichlorobenzene	_  1    1	;	

1LCA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

: EDCLO

Lab Name: ENVIROSYSTEMS Contract 68-D7-0005 ;

Lab Code: ENVSYS Case No. 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 00030911

Date Received: 03/17/00

Lab File ID: 030911

Date Analyzed: 03/22/00

Purge Valume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

CONCENTRATION

CAS NO.	COMPOUND	(ug/L)	Q	
74-87-3	Chloromethane	1	U	
74-83-9	Bromomethane	1	Ū	
75-01-4	Vinyl chloride	1	Ū	
75-00-3	Chloroethane	1	-	
75-09-2	Methylene chloride	2	_	
67-64-1	Acetone	5		
75-15-0	Carbon disulfide	1 1	U	
75-35-4	1.1-Dichloroethene	1	Ū	
75-34-3	1,1-Dichloroethane	1 1	-	
156-59-2	cis-1,2-Dichloroethene	1	-	
156-60-5	trans-1,2-Dichloroethene	1	_	
67-66-3	Chloroform	1	-	
107-06-2	1, 2-Dichloroethane	0.71	_	
78-93-3	2-Butanone	_' 		
74-97-5	Bromochloromethane	1	_	
71-55-6	1,1,1-Trichloroethane	1		
54-23-5	Carbon tetrachloride	1		
75-27-4	Bromodichloromethane	1		
78-87-5	1, 2-Dichloropropane	- 1	_	
10061-01-5	cis-1, 3-Dichloropropene	- 1	_	
79-01-6	Trichloroethene	- 1		
124-49-1	Dibromochloromethane	1		
79-00-5	1, 1, 2-Trichloroethane	1	_	
71-42-2	Benzene	1	: U	
10041-00-4	trans-1,3-Dichloropropene	1		
75-75-7	Data Cransal, 3-DICHIOPOPROPERE	- 1 - <del>1</del>	_	
100-10-1	Bromoform_	_; 1	U	
108-10-1	4-Methyl-2-pentanone	_; 5		
177 10 4	2-Hexanone	_} 5		
70 04 5	Tetrachloroethene	_ 1	U	
19-34-3	1, 1, 2, 2-Tetrachloroethane	_1 1	: U	
106-93-4	1,2-Dibromoethane	_{ }	U	
108-88-3	Toluene	_! 1	; U	
108-90-7	Chlorobenzene	_; 1	U	
	Ethylbenzene		U	
	Styrene	<del>-</del>	l U	
1330-20-7	Xylenes (total)		; U	
541-73-1	1,3-Dichlorobenzene		: U	
106-46-7	1,4-Dichlorobenzene	_; 1	; U	
95-50-1	1,2-Dichlorobenzene		U	
96-12-8	1,2-Dibromo-3-chloropropane_		: U	
120-82-1	1, 2, 4-Trichlorobenzene	1	: U	

1LCE

EFA SAMPLE NO

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SMEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDCLO

Lab Name: ENVIROSYSTEMS

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030911

Date Received: 03/17/00

Lab File ID: 030911

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1 0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 0

: CAS NUMBER

EST. CONC. | COMPOUND NAME | RT | (ug/L) | Q |

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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

EDCL1

Lab Name: ENVIROSYSTEMS Contract 68-D7-0005 ;

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030912

Date Received: 03/17/00

Lab File ID: 030912

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

CONCENTRATION

CAC NO		CUNCENTRATION	_
CAS NO.	COMPOUND	(ug/L)	G
74-87-3	Chloromethane	1 1	
74-83-9	Bromomethane		
75-01-4	Vinyl chloride		
75-00-3	Chloroethane		
75-09-2	Methylene chloride	2 1	_
67-64-1	Acetone	5 (	
75-15-0	Carbon disulfide	_	
75-35-4	1,1-Dichloroethene	1 1	
75-34-3	1,1-Dichloroethane	1	
156-59-2	cis-1,2-Dichloroethene	1 1	
156-60-5	trans-1,2-Dichloroethene	1	
67-66-3	Chloroform	1 1	
107-06-2	1,2-Dichloroethane	1 1	
78-93-3	2-Rutanone	5	
74-97-5	2-Butanone Bromochloromethane	1 1	
71-55-4	1, 1, 1-Trichloroethane		
54-23-5	Carbon tetrachloride		
75-27-4	Bromodichloromethane	_	
78-87-5	1, 2-Dichloropropane	1 1	
10061-01-5	cis-1,3-Dichloropropene	1 1	
79-01-6	Trichloroethene	1 1	
124-48-1	Dibromochloromethane	'   1	
79-00-5	1, 1, 2-Trichloroethane	1 1	
71-43-2	Tripe-relegion de chane	_   1	
10041-02-4	Benzene trans-1,3-Dichloropropene	1	_
75-25-2			
	Bromoform 4-Methyl-2-pentanone	5	
501-70-4		5	
177-10-4	2-Hexanone Tetrachloroethene		_
70-74-5	1, 1, 2, 2-Tetrachloroethane		-
104-00 4	1, 2-Dibromoethane		
100-73-4	Taluana Taluana		
100-00-3	Toluene		
100-70-/	Chlorobenzene Ethylbenzene		_
100-41-4	Etnyloenzene		
100-42-5		<del></del>	U
	Xylenes (total)	{	
10/ 4/ 7	1,3-Dichlorobenzene		
100-46-/	1,4-Dichlorobenzene		
73-30-1	1,2-Dichlorobenzene		
76-12-8	1,2-Dibromo-3-chloropropane_	1	
120-82-1	1, 2, 4-Trichlorobenzene	;	U

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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EFA SAMFLE NO

Lab Name: ENVIROSYSTEMS Contract 58-D7-0005

EDCL1

Lab Code: ENVSYS Case No. 27876 SAS No. SDG No. EDCJ8

Lab Sample ID: 00030912 Date Received: 03/17/00

Lab File ID: 030912 Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml) Dilution Factor: 1 0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: O

											·			
1				:			1		i	EST.	CONC.	1		1
ſ	CA	MUM 3	1BER	1	COMPOUND	NAME	;	RT	į	(ug/	(L)	1	G	,
	<sub>w</sub> ===	=====	======	======	=======	=========	;===	=====	;==	s====	=====	; =	====	1
1				1			!		1			- 1 _		;

11\_04 LOW CONC .WATER VOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO

: EDCL2

Contract. 68-D7-0005 ab Name: ENVIROSYSTEMS

Lab Code: ENVSYS Case No. 27876 SAS No. SDG No.: EDCJ8

Date Received: 03/17/00 Lab Sample ID: 00030913

Lab File ID: 030913 Date Analyzed: 03/22/00

Purge Valume: 25.00 (ml) Dilution Factor: 1 0

			CONCENTRATION	
	CAS NO.	COMPOUND	(ug/L)	Q
;				1 1
i	74-87-3	Chloromethane	_1	; U ;
;	74-83-9	Bromomethane	· 1	:υ :
ŧ	75-01-4	Vinul chloride	1	: U :
;	75-00-3	Chloroethane	_; 1	: U
;	75-09-2	Methylene chloride	_; _;	: U :
1	67-64-1	Acetone	_; 5	: U
ţ	75-15-0	Carbon disulfide	_1 1	; U ;
;	75-35-4	1,1-Dichloroethene	_	: 0
į	75-34-3	1,1-Dichloroethane	_	: U
ì	156-59-2	cis-1,2-Dichloroethene	1	1U :
t	156-60-5	trans-1,2-Dichloroethene	_;	:υ :
į.	67-66-3	Chloroform	1	: 0 :
;	107-06-2	1,2-Dichloroethane	_	: U :
ţ	78-93-3	2-Butanone	1 5	: 0
1	74-97-5	Bromochloromethane	1	: U :
;	71-55-6	1,1,1-Trichloroethane	1	; U ;
1	56-23-5	Carbon tetrachloride	1	10 :
!	75-27-4	Bromodichloromethane	1	:υ :
1	78-87-5	1,2-Dichloropropane	[ 1	10 :
t t	10061-01-5	cis-1,3-Dichloropropene	_ : 1	10 1
;	79-01-6	Trichloroethene	_1	:U :
ł	124-48-1	Dibromochloromethane	_;	: U :
;	79-00-5	1,1,2-Trichloroethane	_ : 1	10 1
1	71-43-2	Benzene	_1	; U ;
¦	10061-02-6	trans-1,3-Dichloropropene	_: 1	:U :
1	75-25-2	Bromoform	_: 1	: U :
;	108-10-1	4-Methyl-2-pentanone	_; 5	: U :
;	591-78-6	2-Hexanone	_; 5	: U ;
;	127-18-4	Tetrachloroethene	_{:	: U :
;	79-34-5	1,1,2,2-Tetrachloroethane	_11	10 :
;	106-93-4	1,2-Dibromoethane	_{_{1}}	10 :
ï	108-88-3	Toluene	_1	10 1
:	108-90-7	Chlorobenzene	_: 1	: U :
;	100-41-4	Ethylbenzene	_; 1	: 0 ;
;	100-42-5	Styrene	_	10 :
;		Xylenes (total)	_; 1	: U :
;	541-73-1	1,3-Dichlorobenzene	1	; U ;
ì	106-46-7	1,4-Dichlorobenzene	_1 1	: U :
;	95-50-1	1,2-Dichlorobenzene	_	; U ;
!	96-12-8	1,2-Dibromo-3-chloropropane_	_	10 1
ť		1,2,4-Trichlorobenzene	1	:U :
:			1	!

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LUW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDCL2

EPA SAMPLE NO

\_ab Name: ENVIROSYSTEMS

Contract. 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No : EDCJ8

Lab Sample ID: 00030913

Date Received: 03/17/00

Lab File ID: 030913

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 0

| EST. CONC. |

CAS NUMBER | COMPOUND NAME | RT | (ug/L) | Q

1LCA

LOW CONC. WATER VULATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

EDCL3

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030914

Date Received: 03/17/00

Lab File ID: 030914

Date Analyzed: 03/22/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

	•	CONCENTRATION
CAS NO.	COMPOUND	(ug/L) Q
{		
1 74-87-3	Chloromethane	_  1  U
74-83-9	Bromomethane	_ 1 10 1
75-01-4	Vinyl chloride	_ 1 (U
/5-00-3	Chloroethane	_ 1   U
1 /5-09-2	Methylene chloride	_! 2 !U !
67-64-1	Acetone Carbon disulfide	_ 5 (U )
75-15-0	Carbon disulfide	_ 1   U
: /5-35-4	1,1-Dichloroethene	_ 1 (U :
: /5-34-3	1,1-Dichloroethane	_  1    U
	cis-1,2-Dichloroethene	
156-60-5	trans-1,2-Dichloroethene	1 10
: 67-66-3	Chloroform_	_ 1 (U
10/-06-2	1,2-Dichloroethane	_
: 78-93-3	2-Butanone	_
1 /4-9/-5	Bromochloromethane	_
; /1-55-6	1,1,1-Trichloroethane	_{
: 56-23-5	Carbon tetrachloride	_ 1 10 1
75-27-4	Bromodichloromethane	_ 1 10
: /8-8/-5	1,2-Dichloropropane	1 10
10051-01-5	cis-1,3-Dichloropropene	_ i (U
1 /9-01-6	Trichloroethene	1 (0
124-48-1	Dibromochloromethane	_ 1 (U
; /9-00-5	1,1,2-Trichloroethane	_ 1   U
: /1-43-2	Benzene	_[ 1 [U ]
10061-02~6	trans-1,3-Dichloropropene	1 10
/5-25-2	Bromoform	_ 1 10
108-10-1	4-Methyl-2-pentanone	_ 5 10 1
591-/8-6	2-Hexanone	
127-18-4	Tetrachloroethene	_ 1 (U
79-34-5	1, 1, 2, 2-Tetrachloroethane	_ 1 (0
106-93-4	1,2-Dibromoethane	_  1   0
108-88-3	Toluene	_
	Chlorobenzene	
	Ethylbenzene	_ 1 10
100-42-5		_
	Xylenes (total)	
541-73-1	1,3-Dichlorobenzene	_ 1 (U
106-46-7	1,4-Dichlorobenzene	1 10
95-50-1	1,2-Dichlorobenzene	_ 1 1 1 1
1 96-12-8	1,2-Dibromo-3-chloropropane_	_ 1 (U )
120-82-1	1, 2, 4-Trichlorobenzene	
		~ 1 · 1

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LOW CONC. WATER VOLATILE DRGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

: EDCL4

Lab Name ENVIROSYSTEMS

Contract 58-D7-0005

Lab Code: ENVSYS Case No. 27876 SAS No. 1

SDG No.: EDCJB

Lab Sample ID: 00030924

Date Received: 03/18/00

·문단과 문화제되었던 12년

Lab File ID: 030924

Date Analyzed 03/23/00

Purge Volume: 25.00 (ml)

Dilution Factor 1 0

GC Calumn: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 0

0.0208

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDCM1

Lab Name: ENVIROSYSTEMS Contract 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No. SDG No.: EDCUB

Lab Sample ID: 00030925 Date Received: 03/18/00

Lab File ID: 030925 Date Analyzed: 03/23/00

Purge Volume: 25.00 (ml) Dilution Factor: 1 0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

		-	CONCENTRATION		
	CAS NO.	COMPOUND	(ug/L)	G.	
:			! (		
i	74-87-3	Chloromethane	1 1	, ; ;	;
ł	74-83-9	Bromomethane	1 11		;
;	75-01-4	Vinyl chloride	1 10		
1	75-00-3	Chloroethane	1 11		!
- 1	75-09-2	Methulene chloride	1 2 11	) :	!
1	6/-64-1	Acetone	1 5 10	,	į
- i	/5-15-0	Carbon disulfide	1 1	) :	į
!	75-35-4	-1,1-Dichloroethene	1 1	;	
ì	75-34-3	-1,1-Dichloroethane	0.715	; ;	
i	156-59-2	-cis-1,2-Dichloroethene	0.710	;	
;	156-60-5	-trans-1,2-Dichloroethene	1 10	, ,	
ł	67-66-3	-Chloroform	1 ((	, ,	
i i	10/-06-2	-1,2-Dichloroethane	1 11	, ;	
;	78-93-3	-2-Butanone	5 ()	;	1
1	/4-97~5	-Bromochloromethane	1 1	/ :	
1	71-55-6	-1,1,1-Trichloroethane	1 ;		Í
1	56-23-5	Carbon tetrachloride	1 11	,	i
1	75-27-4	-Bromodichloromethane	1 11	) ;	í
1	78-87-5	-1,2-Dichloropropane	1 10	, ;	;
1	10061-01-5	-cis-1,3-Dichlaropropene	1 1		1
1	79-01-6	-Intentoroethene	14 April 2012 - 6 137	·. :	i
1	124-48-1	-Dibromochloromethane	1 11		i
1	79-00-5	-1, 1, 2-Trichloroethane	1 10	;	l ì
1	71-43-2	-Benzene	1 10		į
;	10061-02-6	-trans-1,3-Dichloropropene	1 ()	<b>)</b>	į
;	75-25-2	-Bromoform_	1 11	)	1
i	108-10-1	-4-Methyl-2-pentanone	1 5 11	;	ŀ
ł	591~78-6	-2-Hexanone	5 : (	)	l
;	127-18-4	-Tetrachloroethene	1 11	) ;	ľ
;	79-34-5	-1,1,2,2-Tetrachloroethane	1 ()	;	ſ
;	106-93-4	-1,2-Dibromoethane	1 (0	<i>j</i> :	į
;	108-88-3	-Toluene	1 (0	)	i
;	108-90-7	Chlorobenzene	1 10	}	1
i	100-41-4	Ethylbenzene	1 ()	)	1
1	100-42-5	Styrene	1 11	J ,	,
;	1330-20-7	Xylenes (total)	1 11	) ;	i
i	541-73-1	-1,3-Dichlorobenzene	1 11	) :	į
ì	105-46-7	1,4-Dichlorobenzene	1 11	)	i
;	95-50-1	-1,2-Dichlorobenzene	1 10	; ;	i i
:	96-12-8	-1,2-Dibromo-3-chloropropane	1 11	) :	;
1	120-82-1	-1,2,4-Trichlorobenzene	1 11	,	i
ţ			1	:	į

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LDW CONC WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDCMI

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005 |

Lab Code: ENVSYS Case No. 27876 SAS No. 3DG No.: EDCUB

SEPA SAMPLE N.S

Lab Sample ID: 00030925

Date Received 03/18/00

Lab File ID: 030925

Date Analyzed: 03/23/00

Purge Volume: 25.00 (ml)

Dilution Factor 1 0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

CAS NUMBER

Number TICs found: O

EST. CONC. 1 COMPOUND NAME | RT | (ug/L) | Q ;

1L0A

EPA BAMELE NO

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

: EDCM2

Lab Name: ENVIROSYSTEMS

Contract 53-D7-0005 :

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No. EDCJ8

Lab Sample ID: 00030926

Date Received: 03/18/00

Lab File ID: 030926

Date Analyzed: 03/23/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

CONCENTRATION

CAS NO.	COMPOUND	(ug/L)	G
74-87-3	Chloromethane	1 1	
74-83-9	Bromomethane	1	
75-01-4	Vinyl chloride	1 1	
75-00-3	Chloroethane	1 1	_
/5-09-2	Methulene chloride	-	_
67-64-1	Acetone	5 11	_
75-15-0	Carbon disulfide	1 1	
75-35-4	1,1-Dichloroethene		_
75-34-3	1,1-Dichloroethane	1	
156-59-2	cis-1, 2-Dichloroethene	1	
156-60-5	trans-1,2-Dichloroethene		_
67-66-3	Chloroform	1 1	
107-06-2	1,2-Dichloroethane	0.61	_
78-93-3	2-Butanone	5	
74-97-5	Bromochloromethane	1	
71-55-6	1.1,1-Trichloroethane	1	_
56-23-5	Carbon tetrachloride	1 1	_
75-27-4	Bromodichloromethane		_
78-87-5	1,2-Dichloropropane	1	_
10061-01-5	cis-1,3-Dichloropropene		_
79-01-6	Trichloroethene	1	
124-48-1	Dibromochloromethane	1 1	
79-00-5	1, i, 2-Trichloroethane	1	
71-43-2	Benzene	1 1	
10061-02-6	trans-1.3-Dichloropropene		
75-25-2	Bromoform		Ü
108-10-1	4-Methyl-2-pentanone	5 :	
591-78-6	2-Hexanone	5 1	_
127-18-4	Tetrachloroethene	1 1	
79-34-5	1, 1, 2, 2-Tetrachloroethane	1 1	_
106-93-4	1,2-Dibromoethane	1	_
108-88-3	Toluene	1	Ū
108-90-7	Chlorobenzene	1 1	
100-41-4	Ethylbenzene	1 1	
100-42-5	Styrene		
	Xylenes (total)	1 1	
541-73-1	1,3-Dichlorobenzene		Ŭ
106-46-7	1, 4-Dichlorobenzene		U
95-50-1	1, 2-Dichlorobenzene	<del></del>	Ü
96-12-8	1,2-Dibromo-3-chloropropane_		U
100 00 1	1, 2, 4-Trichlorobenzene		U

1111

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA BHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDOM2

Lab Name: ENVIROSYSTEMS

| Contract | 68-D7-0005 | | |

EFA EAMFLE NO

Lab Code: ENVSYS Case No. 27876 SAS No.:

SDG No : EDCJ8

Lab Sample ID: 00030926

Date Received: 03/18/00

Lab File ID: 030926

Date Analyzed. 03/23/00

Purge Volume: 25.00 (ml)

Dilution Factor: 1.0

GC Column: RTX-502.2 ID: 0.530 (mm) Length: 105 (m)

Number TICs found: 0

CAS NUMBER 

0 0235

2LCB LOW CONC. WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJB

	;	EPA		: NB	Z	; F	BP	;	TPH	;	PHL	;	2FP	i	TBP	- !	OTHER	₹ ;	דעם	- ;
	;	SAMPLE	NO.	: %RE	C #	: %R	REC	#:	%REC	#;	%REC	#;	%REC	# :	%REC	# :	%REC	#;	TOT	- ;
	;	======	====	:	===	¦ ≈=	===	== !	====	==;	====	== ;	====	== ;	====	==	=====	== ;	===	: ;
(	110	EDCJ4		: 5	4	;	60	;	64	;	78	1	80	;	52	!	0	;	0	;
(	120	EDCJ5		; 5	0	!	51	:	56	;	68	;	64	;	51	- :	0	1	Ω	;
(	3:	EDCJB		; 6	2	;	60	;	57	;	65	;	64	;	54	;	0	1	0	;
(	04:	EDCJ9		1 5	3	1	47	;	62	;	60	1	56	ł	41	1	0	;	0	:
(	05:	EDCKO		; 5	8	!	61	;	76	;	58	;	50	;	43	:	0	ł	0	;
(	160	EDCK1		: 5	2	1	61	;	69	ì	64	;	60	;	41	;	0	;	0	;
(	77:	EDCK2		: 6	2	!	56	;	60	;	66	;	63	;	46	;	0	;	0	;
(	180	EDCK3		: 4	8	:	52	;	64	;	49	;	44	;	37	- 1	0	;	0	;
(	9:	EDCK4		: 4	7	:	46	:	50	;	48	;	44	:	38	- 1	0	1	0	;
1	101	EDCK5		1 5	7	!	56	;	61	;	74	;	70	;	48	1	0	:	0	;
1	111	EDCK6		: 5	2	:	52	;	75	;	70	;	66	;	51	- 1	0	;	0	;
1	121	EDCK8		: 4	5	:	42	;	40	;	56	ţ	54	;	44	:	0	;	0	i
1	13:	EDCK9		; 5	4	:	52	;	60	;	66	!	62	;	52	;	0	;	0	;
1	4:	EDCLO		; 5	6	:	53	;	67	;	68	ł	65	;	53	;	0	;	0	;
1	15;	EDCL4		: 5	7	:	62	1	74	;	63	;	57	:	48	:	0	1	0	;
1	161	SLCS06		: 6	8	:	63	ł	72	;	69	;	60	i	51	;	0	;	0	;
1	171	SBLK73		: 6	7	;	61	1	70	;	61	;	57	;	53	;	0	;	0	;
1	181	SBLK76		: 6	0	;	61	;	72	}	67	1	58	;	48	1	0	1	0	;
	;			;		; _		:		;		;		:		;		;		}

				Q(	LIMITS
S1	(NBZ)	=	Nitrobenzene-d5	(	23-120)
S2	(FBP)	=	2-Fluorobiphenyl	(	30-115)
53	(TPH)	=	Terpheny1	(	18-140)
<b>S4</b>	(PHL)	=	Phenol-d5	(	15-115)
S5	(2FP)	=	2-Fluorophenol	(	15-121)
S6	(TBP)	=	2,4,6-Tribromophenol	(	15-130)

<sup>#</sup> Column to be used to flag recovery values

<sup>\*</sup> Values outside of contract required QC limits

D Surrogates diluted out

LOW CONC. WATER SEMINOLATILE LAB CONTROL SAMPLE RECOVERY

EPA SAMPLE NO

SLCS06

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 0322LFBA2

LCS Lot No.:

Lab File ID: 0322LFBA2

Date Extracted: 03/22/00

LCS Aliquot: 1000 (ul)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 5.0

	AMOUNT ADDED (ng)	;	AMDUNT RECOVERED (ng)		REC	GC :
! Phenol	*	•	20. 4			,
bis(2-Chloroethyl)ether		1	12. 0	;	60	
: 2-Chlorophenol		;	21.6	1	54	150-1101
! N-Nitroso-di-n-propylamine	20.0	;	10. 9	}	54	130-1101
: Hexachloroethane	20.0	}	9.04	1	45	120-1101
: Isophorone	20.0	;	14.0	1	70	:50-110:
: Napthalene		;	12.2	;	61	130-1101
: 4-Chloroaniline		;	13. 2	;	33	110-1201
: 2,4,6-Trichlorophenol	40.0	;	25. 5	;	64	140-1201
1 2,4-Dinitrotoluene	20.0	;	10.5	;	52	130-1201
: Diethylphthalate	20.0	;	13. 3	;	66	:50-120:
N-Nitrosodiphenylamine	20.0	1	9. 55	1	48	130-1101
: Hexachlorobenzene		ï	14.4	1	72	140-1201
: Benzo(a)pyrene	20.0	;	11.7	;	58	:50-120:
·	<b>:</b>	;_		.¦_		::

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk

LCS Recovery: O outside limits out of 14 total.

CUMMENTS:

<sup>\*</sup> Values outside of QC limits

LOW CONC. WATER SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO

SBLK73

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 0322SWBA1

Date Extracted: 03/22/00

Lab File ID: 03225WBA1

Date Analyzed: 03/28/00

Instrument ID: F5100A

Time Analyzed: 0922

## THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

i EPA	: LAB	LAB	DATE
<del></del>			<del></del>
: SAMPLE NO.	: SAMPLE ID	FILE ID	: ANALYZED :
=========	=   ==========	== { ===========	==   =======
01:EDCJ8	: 00030902	: 5030902	1 03/28/00 1
02:EDCKO	: 00030903	1 5030903	1 03/28/00 1
03:EDCK1	: 00030904	1 5030904	1 03/28/00 1
04;EDCK2	: 00030905	: 5030905	1 03/28/00 1
05:EDCK3	1 00030906	: S030906	1 03/28/00 1
06:EDCK4	: 00030907	: S030907	1 03/28/00 1
07:EDCL4	00030924	: S030924	1 03/28/00 1
08:SLCS06	: 0322LFBA2	1 0322LFBA2	1 03/28/00 1
1	,		

COMMENTS: SBLK73 BNA H20 BLANK 3/22/00

F5100A 40(2)/320/11

LOW CONC. WATER SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO

SBLK76

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 03235WBA2

Date Extracted: 03/23/00

Lab File ID: 0323SWBA2

Date Analyzed: 03/28/00

Instrument ID: F5100A

Time Analyzed: 1745

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

: EPA	: LAB	! LAB	DATE :
: SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
=====================================	:	=	=   =======
01:EDCJ4	: 00030920	5030920	1 03/29/00 1
02:EDCJ5	: 00030921	5030921	( 03/29/00
03:EDCJ9	1 00030922	: 5030922	1 03/29/00 1
04   EDCK5	: 00030908	: 5030908	1 03/29/00 1
0.5   EDCK6	1 00030909	: 5030909	1 03/29/00 1
06!EDCK8	1 00030923	5030923	1 03/29/00 1
O7:EDCK9	: 00030910	5030910	1 03/29/00 1
08:EDCLO	: 00030911	5030911	: 03/29/00 :
;	1		1

JOMMENTS: SBLK76 BNA H2D BLANK 3/23/00

F5100A 40(2)/320/11

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

SBLK73

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS

Case No.: 27876

SAS No. :

SDG No.: EDCJ8

Lab Sample ID: 03225WBA1

03225WBA1

Date Received:

Date Extracted: 03/22/00

Lab File ID: Sample volume: 1000 (ml)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000

(u1)

Dilution Factor: 1.0

Injection Volume:

1.0 (01)

pH: 5.0

CONCENTRATION CAS NO. (ug/L) Q COMPOUND : U 1 108-95-2----Phenol\_ 1 111-44-4-----bis(2-Chloroethyl)Ether\_\_\_ 10 | 95-57-8-----2-Chlorophenol 10 1 95-48-7-----2-Methylphenol\_ 10 : 108-60-1----2,2'-oxybis(1-Chloropropane)\_ : U 5 :0 : 106-44-5-----4-Methylphenol\_\_ | 621-64-7----N-Nitroso-Di-n-Propylamine\_\_\_\_ 10 : 67-72-1----Hexachloroethane\_\_\_\_ 5 : 0 | 98-95-3----Nitrobenzene\_\_\_\_ 5 10 : 78-59-1------Isophorone\_\_ IU 1 88-75-5----2-Nitrophenol\_\_\_\_ :U : 105-67-9-----2,4-Dimethylphenol\_\_\_ 10 ! 111-91-1-----bis(2-Chloroethoxy)Methane\_\_\_ 10 5 10 1 120-83-2----2, 4-Dichlorophenol : 91-20-3-----Naphthalene\_ 11 5 : U : 106-47-8-----4-Chloroaniline 5 ; U : 87-68-3-----Hexachlorobutadiene : 59-50-7--- ----4-Chloro-3-Methylphenol\_\_\_ 5 10 : 91-57-6----2-Methylnaphthalene\_\_\_ 5 10 5 77-47-4----Hexachlorocyclopentadiene\_\_\_ 10 5 : U : 88-06-2----2,4,6-Trichlorophenol\_\_\_\_\_ : 95-95-4----2,4,5-Trichlorophenol\_\_\_\_ 20 : U ! 91-58-7----2-Chloronaphthalene\_\_\_\_ 5 10 20 IU : 88-74-4----2-Nitroaniline\_\_ 5 10 : 131-11-3----Dimethylphthalate\_\_\_\_ : 208-96-8-----Acenaphthylene\_\_\_\_\_ 5 10 : 606-20-2----2,6-Dinitrotoluene\_\_\_\_ 5 10 ! 99-09-2----3-Nitroaniline\_\_\_\_\_ 20 IU 5 ;U : 83-32-9-----Acenaphthene \_\_\_

1LCC

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

SBLK73

Lab Name: ENVIROSYSTEMS

Contract. 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 0322SWBA1

Date Received:

Lab File ID: 03225WBA1

Date Extracted: 03/22/00

Sample volume: 1000 (ml)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 5.0

				٧
	CAS NO.	COMPOUND	(ug/L)	Q
;			!	1 1
;	51-28-5	-2,4-Dinitrophenol	20	: U
;	100-02-7	4-Nitrophenol	20	10 1
;	132-64-9	Dibenzofuran	; 5	:U :
;	121-14-2	-2,4-Dinitrotoluene	5	(U )
;	84-66-2	-Diethylphthalate	5	ιυ :
1	7005-72-3	4-Chlorophenul-phenulether	; 5	10 1
- 1	86-73-7	-Fluorene -4-Nitroaniline	5	10 1
1	100-01-6	-4-Nitroaniline	20	10 1
1	534-52-1	4,6-Dinitro-2-methylphenol	: 20	10 1
;	86-30-6	-N-Nitrosodiphenylamine (1)	; 5	: U :
;	101-55-3	-4-Bromophenyl-phenylether	5	10 1
;	118-74-1	Hexachlorobenzene	; 5	: U :
;	87-86-5	Pentachlorophenol	1 20	10 :
;	85-01-8	Phenanthrene	: 5	10 1
i	120-12-7	Anthracene	; 5	; U ;
;	84-74-2	Di-n-Butylphthalate	; 5	10 1
;	206-44-0	Fluoranthene	; 5	10 1
1	129-00-0	-Pyrene	5	(U )
1	85-68-7	Butylbenzylphthalate	; 5	10 1
1	91-94-1	-3,3'-Dichlorobenzidine	; 5	: U :
;	56-55-3	Benzo(a)Anthracene	5	(U )
i	218-01-9	Chrysene	; 5	ιυ :
} \$	117-81-7	bis(2-Ethylhexyl)Phthalate	1 5	(U )
1	117-84-0	Di-n-octylphthalate	.1 5	10 1
1	205-99-2	Benzo(b)Fluoranthene	5	:U :
1	207-08-9	Benzo(k)Fluoranthene	.1 5	10 1
;	50-32-8	Benzo(a)Pyrene	.1 5	10 1
;	193-39-5	Indeno(1,2,3-cd)Pyrene	.; 5	; U ;
;		Dibenz(a,h)Anthracene		: U
;	191-24-2	Benzo(g,h,i)Perylene	5	:U :
;			!	_''
(	1) - Cannot be	separated from Diphenylamine		

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SBLK73

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876

SAS No.:

SDG No.: EDCJ8

EPA SAMPLE NO

Lab Sample ID: 03225WBA1

Date Received:

Date Extracted: 03/22/00

Lab File ID: 03225WBA1

Concentrated Extract Volume: 1000

Date Analyzed: 03/28/00

Sample volume: 1000 (ml)

(u1)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 5. 0

Number TICs found:

EST. CONC.

CAS NUMBER 

COMPOUND NAME

RT

(ug/L)

1 L\_C B

EPA SAMPLE NO

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SBLK76

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 0323SWBA2 Date Received:

Lab File ID: 0323SWBA2 Date Extracted: 03/23/00

Sample volume: 1000 (ml) Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (u1) pH: 5.0

CONCENTRATION CAS NO. COMPOUND (ug/L) Q | 108+95-2----Phenol \_ IU 111-44-4-----bis(2-Chloroethyl)Ether\_ 10 95-57-B-----2-Chlorophenol\_\_\_\_ 10 | 95-48-7----2-Methylphenol 5 10 108-60-1----2,2'-oxybis(1-Chloropropane)\_{ 5 : U : 106-44-5-----4-Methylphenol\_\_\_ 5 ! U 621-64-7----N-Nitroso-Di-n-Propylamine\_\_ 5 1 U : 67-72-1-----Hexachloroethane 5 10 | 98-95-3-----Nitrobenzene\_\_\_\_ 10 | 78-59-1-----Isophorone\_\_\_ :U : 88-75-5----2-Nitrophenol 10 105-67-9----2, 4-Dimethylphenol\_ 5 10 | 111-91-1----bis(2-Chloroethoxy)Methane\_\_\_ 5 : U 120-83-2----2,4-Dichlorophenol\_\_\_\_ 5 10 91-20-3-----Naphthalene 5 : U 5 106-47-8----4-Chloroaniline 10 | 87-68-3-----Hexachlorobutadiene : U : 59-50-7-----4-Chloro-3-Methylphenol\_\_ 5 10 | 91-57-6----2-Methylnaphthalene\_\_\_ 5 !U | 77-47-4-----Hexachlorocyclopentadiene\_\_\_ 5 10 88-06-2----2,4,6-Trichlorophenol\_\_\_\_ 5 10 : 95-95-4----2,4,5-Trichlorophenol\_\_\_\_\_ 20 !U : 91-58-7----2-Chloronaphthalene\_\_\_\_ lU 5 | 88-74-4----2-Nitroaniline\_\_\_\_ 20 10 : 131-11-3-----Dimethylphthalate\_\_\_\_\_ 5 10 : 208-96-8-----Acenaphthylene\_\_\_\_ 10 : 606-20-2-----2,6-Dinitrotoluene\_\_\_\_\_ 5 10 | 99-09-2----3-Nitroaniline\_\_\_\_ 20 10 : 83-32-9-----Acenaphthene\_\_\_\_ IU 5

1200

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

SBLK76

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS

Case No.: 27876

SAS No. :

SDG No.: EDCJ8

Lab Sample ID: 03235WBA2

Date Received:

Date Extracted: 03/23/00

Lab File ID:

03235WBA2

Sample volume: 1000 (ml)

Date Analyzed:

03/28/00

Concentrated Extract Volume: 1000

(01)

Dilution Factor: 1.0

Injection Volume:

1.0 (01)

5.0 ρH:

CONCENTRATION CAS NO. COMPOUND (ug/L) Q 1 51-28-5-----2, 4-Dinitrophenol 20 10 1 100-02-7-----4-Nitrophenol\_\_\_\_ ; U 20 | 132-64-9-----Dibenzofuran\_\_\_ 5 : U | 121-14-2----2,4-Dinitrotoluene\_\_\_\_ 5 ! U : 84-66-2----Diethylphthalate\_\_\_ 5 1U 5 : 7005-72-3----4-Chlorophenyl-phenylether\_ 10 | 86-73-7----Fluorene\_\_\_ 5 IU 100-01-6----4-Nitroaniline 20 1 U | 534-52-1-----4,6-Dinitro-2-methylphenol 20 10 | 86-30-6----N-Nitrosodiphenylamine (1)\_\_\_ 5 10 101-55-3----4-Bromophenyl-phenylether\_\_\_\_ 10 | 118-74-1-----Hexachlorobenzene\_\_\_\_\_ 5 10 | 87-86-5----Pentachlorophenol 20 1 U : 85-01-8-----Phenanthrene\_\_\_\_ 5 : U | 120-12-7-----Anthracene 10 : 84-74-2----Di-n-Butylphthalate\_\_ 5 10 : 206-44-0-----Fluoranthene\_\_\_\_ 5 10 : 129-00-0-----Pyrene\_\_\_ 5 10 : 85-68-7----Butylbenzylphthalate\_\_\_\_ 3 IJ. | 91-94-1----3,3'-Dichlorobenzidine\_\_\_\_\_ 5 1 U : 56-55-3----Benzo(a)Anthracene\_\_\_\_ 5 l U : 218-01-9-----Chrysene\_ 10 | 117-81-7-----bis(2-Ethylhexyl)Phthalate\_ 10 : 117-84-0----Di-n-octylphthalate\_\_\_\_ 10 | 205-99-2----Benzo(b)Fluoranthene\_\_\_\_\_ 5 : U : 207-08-9----Benzo(k)Fluoranthene\_\_\_\_ 5 10 5 ! U : 50-32-8-----Benzo(a)Pyrene\_ : 193-39-5-----Indeno(1,2,3-cd)Pyrene\_\_\_ 5 10 10 | 53-70-3-----Dibenz(a,h)Anthracene\_\_\_\_ l U | 191-24-2----Benzo(g,h,i)Perylene\_\_\_\_

iLCF

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

SBLK76

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 0323SWBA2

Date Received:

Lab File ID: 03235WBA2

Date Extracted: 03/23/00

Sample volume: 1000 (ml)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 5.0

Number TICs found: O

	<del></del>									
i kydy		;		:		;	EST. CONC.			;
1	CAS NUMBER	;	COMPOUND NAME	;	RT	;	(ug/L) :	G	4	:
; =		= ; =	=======================================	: ; =	======	: =	========	===	==	ľ
;_		;_		<u> </u>		: _				1

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

SLCS06

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876

SDG No.: EDCJ8

Lab Sample ID: 0322LFBA2 Date Received:

Lab File ID: 0322LFBA2 Date Extracted: 03/22/00

SAS No. :

Sample volume: 1000 (ml) Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul) pH: 5.0

	CAS NO.	CONCENTRATION (ug/L)	Q	
	CAS NO.	COMPOUND	(Ug/L)	u
;	;		!	
:	108-95-2	-Phenol	20	1
;	111-44-4	-bis(2-Chloroethyl)Ether	12	}
;	95-57-8	-2-Chlorophenol	1 22	;
;	95-48-7	-2-Methylphenol	5	: U :
;	108-60-1	-2,2'-oxybis(1-Chloropropane)_	5	: U
;	106-44-5	-4-Methylphenol	5	: U
;	621-64-7	-N-Nitroso-Di-n-Propylamine	11	1
;	67-72-1	-Hexachloroethane	: 9	}
;	98-95-3	-Nitrobenzene		!U !
;	78-59-1	-Isophorone	14	;
;	88-75-5	-2-Nitrophenol	5	U :
;	105-67-9	-2,4-Dimethylphenol	5	IU :
		-bis(2-Chloroethoxy)Methane	5	: U
;	120-83-2	-2,4-Dichlorophenol	5	: U
ł	91-20-3	-Naphthalene	12	:
;	106-47-8	-4-Chloroaniline	13	;
1	87-68-3	-Hexachlorobutadiene	<del>.</del> 5	:U :
i	59-50-7	-4-Chloro-3-Methylphenol	5	: U :
;	91-57-6	-2-Methylnaphthalene		; U ;
;	77-47-4	-Hexachlorocyclopentadiene	5	: U :
;	88-06-2	-2,4,6-Trichlorophenol	: 26	; ;
;	95-95-4	-2,4,5-Trichlorophenol	; 20	:U :
;	91-58-7	-2-Chloronaphthalene	; 5	: U
;	88-74-4	-2-Nitroaniline	: 20	:U :
:	131-11-3	-Dimethylphthalate	; 5	10 1
ł	208-96-8	-Acenaphthylene	; 5	10 :
;	606-20-2	-2,6-Dinitrotoluene	; 5	10 :
;	99-09-2	-3-Nitroaniline		10 1
4	83-32-9	Acenaphthene	5	:U :
;			1	!;

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LOW CONC WATER SEMIVOLATILE DRGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

SLCS06

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Date Received:

Lab Sample ID: 0322LFBA2 Lab File ID: 0322LFBA2

Date Extracted: 03/22/00

SDG No.: EDCJ8

Sample volume: 1000 (ml)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

(1) - Cannot be separated from Diphenylamine

Lab Code: ENVSYS Case No.: 27876 SAS No.:

pH: 5.0

	CAS NO.	COMPOUND	CONCENTRATION (ug/L)	G 1	
;	÷		1	;	_;
i	51-28-5	2,4-Dinitrophenol	1 20	; U	;
ł	100-02-7	-4-Nitrophenol	: 20	; U	ł
ŀ	132-64-9	Dibenzofuran	5	! U	1
;	121-14-2	2,4-Dinitrotoluene	10	;	;
;	84-66-2	Diethylphthalate	13	;	i
ł	7005-72-3	4-Chlorophenyl-phenylether	1 5	ΙU	;
;	86-73-7	Fluorene	: 5	ΙU	;
;	100-01-6	4-Nitroaniline	1 20	:U	i
1		4,6-Dinitro-2-methylphenol		: U	;
1	86-30-6	N-Nitrosodiphenylamine (1)	10	;	1
;		4-Bromophenyl-phenylether		ŀυ	}
ŀ	118-74-1	Hexachlorobenzene	14	1	;
1	87-86-5	Pentachlorophenol	: 20	; U	;
;	85-01-8	Phenanthrene	; 5	10	;
1	120-12-7	Anthracene	5	l U	1
;	84-74-2	Di-n-Butylphthalate	1 5	1 U	1
;	206-44-0	Fluoranthene	1 5	l U	1
;	129-00-0	Pyrene	5	ΙU	;
;	85-68-7	Butylbenzylphthalate	5	l U	;
;	91-94-1	3,3'-Dichlorobenzidine	5	ŀυ	!
1	56-55-3	Benzo(a)Anthracene	5	l U	!
;	218-01-9	Chrysene	5	ŧυ	1
,	117-81-7	bis(2-Ethylhexyl)Phthalate	1 5	ΙU	1
i	117-84-0	Di-n-octylphthalate	5	: U	1
;	205-99-2	Benzo(b)Fluoranthene	5	ΙU	;
;		Benzo(k)Fluoranthene		ΙU	;
1		Benzo(a)Pyrene		:	ļ
1	193-39-5	Indeno(1,2,3-cd)Pyrene	5	IU	;
;	53-70-3	Dibenz(a,h)Anthracene	5	ίŪ	:
1	191-24-2	Benzo(g,h,i)Perylene	5	Ü	;
;	- · · <b>-</b>		-	-	1
Ì.				_ ·	

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCJ4

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030920 Date Received: 03/18/00

Lab File ID: S030920 Date Extracted: 03/23/00

Sample volume: 1000 (ml) Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul) pH: 7.0

			CONCENTRATION			
	CAS NO.	COMPOUND 54125	(ug/L)	Q		
;	;		:	:		
;	108-95-2	Phenol		U :		
:	111-44-4	bis(2-Chloroethyl)Ether	5 (1	U :		
;	95-57-8	2-Chlorophenol	5 1	J :		
;	95-48-7	2-Methylphenol	. 5 :	U :		
;	108-60-1	2,2'-oxubis(1-Chloropropane)	5 !!	U :		
;	106-44-5	4-Methylphenol	5 👭	U :		
;	621-64-7	N-Nitroso-Di-n-Propylamine	5 :	U :		
ì	67-72-1	Hexachloroethane	5 (	<b>U</b> :		
i	98-95-3	Nitrobenzene	5 :	U :		
;	78-59-1	Isophorone	5 1	U :		
;	88-75-5	2-Nitrophenol	5 1	U ;		
ľ	105-67-9	2,4-Dimethylphenol	5 1	U :		
;	111-91-1	bis(2-Chloroethoxy)Methane	5 1	U ;		
;	120-83-2	2,4-Dichlorophenol	5 1	U :		
;	91-20-3	Naphthalene	5 1	U :		
ï	106-47-8	4-Chloroaniline	5 1	U :		
ŀ	87-68-3	Hexachlorobutadiene	5 1	U :		
ì	5 <b>9-5</b> 0-7	4-Chloro-3-Methulphenol	5 1	U :		
;	91-57-6	2-Methylnaphthalene	5 :	U I		
;	77-47-4	Hexachlorocyclopentadiene	5 (	U :		
;	88-06-2	2,4,6-Trichlorophenol	5 ;	U I		
ŧ	95-95-4	2,4,5-Trichlorophenol	20	U ;		
;	91-58-7	2-Chloronaphthalene	5 ;	U ;		
1	88-74-4	2-Nitroaniline	: 20 :	U :		
;	131-11-3	Dimethylphthalate	5 1	U :		
:	208-96-8	Acenaphthylene	5 1	U :		
;	606-20-2	2,6-Dinitrotoluene	5 1	Ū		
;	99-09-2	3-Nitroaniline	20 :	Ü		
;	83-32-9	Acenaphthene	5	Ü		
;			.	}		

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCJ4

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No : EDCJB

Lab Sample ID: 00030920

Date Received: 03/18/00

Lab File ID: S030920

Date Extracted: 03/23/00

Date Analyzed: 03/29/00

Sample volume: 1000 (ml)

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

		CONCENTRATION	٧		
	CAS NO.	COMPOUND	(ug/L)	G	
;			<u> </u>	1 :	1
;	51-28-5	-2,4-Dinitrophenol	30	10 1	
1	100-02-7	-4-Nitrophenol	20	10 :	
1	132-64-9	-Dibenzofuran	5	10 1	
;	121-14-2	-2,4-Dinitrotoluene	5	:U :	i i
1	84-66-2	-Diethylphthalate	5	10 1	1
;	7005-72-3	-4-Chlorophenyl-phenylether	5	10 1	) )
;	86-73-7	-Fluorene	5	10 1	; J
ļ	100-01-6	-4-Nitroaniline	20	10 :	
;	534-52-1	-4,6-Dinitro-2-methylphenol	20	ιυ :	i
!	86-30-6	-N-Nitrosodiphenylamine (1)	5	: U :	;
;	101-55-3	-4-Bromophenyl-phenylether	5	:U :	;
ŀ	118-74-1	-Hexachlorobenzene	5	: 0 :	:
1	87-86-5	-Pentachlorophenol	: 20	10 1	;
i	85-01-8	-Phenanthrene	5	(U )	;
;	120-12-7	-Anthracene	5	i U	;
;	84-74-2	-Di-n-Butylphthalate	5	: U	;
;	206-44-0	-Fluoranthene	; 5	10 1	;
;	129-00-0	-Pyrene	5	10	! !
;	85-68-7	-Butylbenzylphthalate	; 5	IU I	1
;	91-94-1	-3,3'-Dichlorobenzidine	5	: U	!
;	56-55-3	-Benzo(a)Anthracene	5	l U	1
;	218-01-9	-Chrysene	; 5	: U	!
;	117-81-7	-bis(2-Ethylhexyl)Phthalate	5	: U	ł
;	117-84-0	-Di-n-octylphthalate	5	ΙU	:
;	205-99-2	-Benzo(b)Fluoranthene	5	: U	;
1	207-08-9	-Benzo(k)Fluoranthene	5	: U	;
- ;	50-32-8	-Benzo(a)Pyrene	: 5	! U	;
ť	193-39-5	-Indeno(1,2,3-cd)Pyrene	; 5	: U	;
;	53-70-3	-Dibenz(a,h)Anthracene	5	ŧυ	}
;	191-24-2	-Benzo(g,h,i)Perylene	5	ΙU	;
;			!	!	!

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDCJ4

EPA SAMPLE NO

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

SAS No. : SDG No.: EDCJB Lab Code: ENVSYS Case No.: 27876

Lab Sample ID: 00030920

Date Received: 03/18/00

Lab File ID: S030920

Date Extracted: 03/23/00

Sample volume: 1000 (ml)

Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

Number TICs found:

										_
ŀ		;	:	1	1		EST.	CONC.	;	;
i	CAS	NUMBER	;	: COMPOUND	NAME !	RT	( U	g / L )	; Q	1
:	=====	-======	===:		========::	=======	======	======	=====	: ;
;			;	1	;		í		;	_;

EPA SAMPLE NO

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCJ5

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJB

Lab Sample ID: 00030921

Date Received: 03/18/00

Lab File ID: S030921

Date Extracted: 03/23/00

Sample volume: 1000 (ml)

Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

				CONCENTRATION	4	
	CAS NO.	COMPOUND	5. 37	(ug/L)	G	
;	:				!	-
;	108-95-2	-Phenol	roethyl)Ether	5	! U	ł
;	111-44-4	-bis(2-Chlo	roethyl)Ether	5	: U	;
ţ	95-57-8	-2-Chloroph	enol	5	ŧυ	i
;	95-48-7	-2-Methylph	enol	5	: U	;
;	108-60-1	-2,2'-oxubi	s(1-Chloropropane)	5	ΙU	1
1	106-44-5	-4-Methylph	enol	5	IU	}
ł	621-64-7	-N-Nitroso-	enol Di-n-Propylamine	5	: U	ł
i	67-72-1	-Hexachloro	ethane	5	l U	ľ
;	98-95-3	-Nitrobenze	ne	5	ŀυ	1
1	78-59-1	-Isaaharane		5	10	:
;	88-75-5	-2-Nitrophe	nol	5	: U	;
;	105-67-9	-2,4-Dimeth	nolylphenol	5	ΙU	;
f	111-91-1	-bis(2-Chlo	roethoxy)Methane	5	1 U	1
;	120-83-2	-2,4-Dichlo	rophenol	5	l U	;
1	91-20-3	-Naphthalen	e	5	: U	:
;	106-47-8	-4-Chloroan	iline	5	; U	;
į	87-68-3	-Hexachloro	butadiene	5	!U	;
;	59-50-7	-4-Chloro-3	-Methylphenol	¦ 5	! U	;
;	91-57-6	-2-Methylna	phthalene	; 5	ŀυ	;
;	77-47-4	-Hexachloro	cyclopentadiene	; 5	10	;
;	88-06-2	-2,4,6-Tric	hlorophenol	; 5	ΙU	;
;	95-95-4	-2, 4, 5-Tric	hlorophenol	: 20	!U	;
;	91-58-7	-2-Chlorona	phthalene	5	: U	;
ť	88-74-4	-2-Nitroani	line	; 20	IU	1
;	131-11-3	-Dimethylph	thalate	5	: U	;
;	208-96-8	-Acenaphthy	lene	; 5	: U	:
;	606-20-2	-2,6-Dinitr	otoluene	5	IU.	1
;	99-09-2	-3-Nitroani	line	: 20	: U	1
;	83-32-9	-Acenaphthe	ne	5	! U	ł
;	**************************************			!	_	_

## 1 L C C

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Code: ENVSYS Case No.: 27876 SAS No.:

EPA SAMPLE NO

EDCJ5

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

SDG No. : EDCJ8

Lab Sample ID: 00030921

Date Received: 03/18/00

Lab File ID: S030921

Date Extracted: 03/23/00

Sample volume: 1000 (ml)

Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	N Q	
	5-1707			<del></del> .
51-70-5		; 20	   U	;
100-07-7	2,4-Dinitrophenol	_, _20		i
127-64-9	4-Nitrophenol Dibenzofuran	_; 20 ; 5	; U ! U	í
131-14-7	2,4-Dinitrotoluene	_, 5	10	•
04-44-7	Diethylphthalate	_, ; 5	10	1
700572-2		_, 5	· <del>-</del>	1
7003-72-3	4~Cnioropnenyi-pnenyiecher	_, _; 5	: U	
100-01-4	Fluorene	_ ' 70	I U	i
100-01-6	4-Nitroaniline 4,6-Dinitro-2-methylphenol	_; 20	IU	i
534-52-1	4, 6-Dinitro-2-metnylphenol	_; 50	10	i
86-30-6	N-Nitrosodiphenylamine (1)	_ 5	!U	
101-55-3	4-Bromophenyl-phenylether	_	10	i
118-/4-1	Hexachlorobenzene	_ 5	IU	
	Pentachlorophenol		IU	
85-01-8	Phenanthrene	5	U	
120-12-7	Anthracene	_; 5	υ	
84-74-2	Di-n-Butylphthalate	_} 5	: U	
206-44-0	Fluoranthene	_	ŀυ	
129-00-0	Pyrene	_; 5	; U	
85-68-7	Butylbenzylphthalate	i 5	ΙU	
91-94-1	3,3'-Dichlorobenzidine	_  5	ΙU	
56-55-3	Benzo(a)Anthracene	: 5	; U	
218-01-9	Chrysene	_; 5	IU	
117-81-7	bis(2-Ethylhexyl)Phthalate	_: 5	ŀυ	
117-84-0	Di-n-octylphthalate	5	; U	
205-99-2	Benzo(b)Fluoranthene		ŀυ	
207-08-9	Benzo(k)Fluoranthene	5	ΙU	
	Benzo(a)Pyrene		ΙU	
193-39-5	Indeno(1, 2, 3-cd)Pyrene	 	ŧυ	
53-70-3	Dibenz(a,h)Anthracene	; 5	ŀŪ	
191-24-2	Benzo(g,h,i)Perylene	; 5	ΙŪ	

<sup>(1) -</sup> Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

\_\_\_\_\_\_

EPA SAMPLE NO

EDCJ5

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030921 Date Received: .03/18/00

Lab File ID: S030921 Date Extracted: 03/23/00

Sample volume: 1000 (ml) Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

injection Volume: 1.0 (u1) pH: 7.0

Number TICs found: 0

	,		!			1		;	EST.	CONC.	1		ì
4 100	CAS	NUMBER	*	COMPOUND	NAME	;	RT	;	(ug	/L)	;	Q	ì
	; =====	=========	=======	========	==========	:===	=====	;==	=====	=====	; ; =	====	ï
	)		1			;		1			;		5

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

**EDCJ8** 

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030902 Date Received: 03/17/00

Lab File ID: S030902 Date Extracted: 03/22/00

Sample volume: 1000 (ml) Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul) pH: 7.0

		CONCENTRATION			
	CAS NO.	COMPOUND	(ug/L)	Q	
;	;			1 1	
;	108-95-2	-Phenol	5	10 1	
;	111-44-4	-bis(2-Chloroethul)Ether	5	10 1	
;	95-57-8	-2-Chlorophenol	5	(U )	
ł	95-48-7	-2-Methylphenol	5	1U 1	
t	108-60-1	-2,2'-oxybis(1-Chloropropane)_	5	10 1	
1	106-44-5	-4-Methylphenol	5	10 1	
1	621-64-7	-N-Nitroso-Di-n-Propylamine	5	10 1	
;	67-72-1	-Hexachloroethane	5	:U :	
;	98-95-3	-Nitrobenzene	; 5	:U :	
;	78-59-1	-Isophorone	; 5	1U 1	
ï	88-/5-5	-2-Nitrophenol	; 5	:U :	
:	105-67-9	-2,4-Dimethylphenol	5	10 1	
1	111-91-1	-bis(2-Chloroethoxy)Methane	; 5	10 1	
;	120-83-2	-2,4-Dichlorophenol	5	ιυ :	
ě	91-20-3	Naphthalene	5	ιυ ι	
í	106-47-8	-4-Chloroaniline	5	: U :	
;	87-68-3	Hexachlorobutadiene	5	10 1	
ŀ	59-50-7	4-Chloro-3-Methylphenol	5	:U :	
- 1	91-57-6	-2-Methylnaphthalene	; 5	:U :	
;	77-47-4	Hexachlorocyclopentadiene	: 5	: U	
1	88-04-5	2, 4, 6-Trichlorophenol	; 5	10 1	
;	95-95-4	2,4,5-Trichlorophenol	; 20	10 1	
;	91-58-7	2-Chloronaphthalene	: 5	1U 1	
1	88-74-4	2-Nitroaniline	; 20	1U 1	
1	131-11-3	Dimethylphthalate	; 5	10 :	
1	208-96-8	Acenaphthylene	; 5	: U :	
ł	606-20-2	2,6-Dinitrotoluene	1 5	: U :	
ł	99-09-2	3-Nitroaniline	; 50	(U (	
;	83-32-9	Acenaphthene	5	:U :	
;	- 11		i i	_;;	

1 L C C

EPA SAMPLE NO.

. LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

**EDCUB** 

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 00030902

Date Received: 03/17/00

Lab File ID: S030902

Date Extracted: 03/22/00

Sample volume: 1000 (ml)

Dilution Factor: 1.0

Date Analyzed: 03/28/00

Injection Volume: 1.0 (ul)

Concentrated Extract Volume: 1000 (ul)

pH: 7.0

CONCENTRATION

		CONCENTRATIL	CUNCENTRATION		
CAS NO	D. COMPOUND	(ug/L)	G		
:		1	;		
51 <u>-</u> 28-	-52,4-Dinitrophenol	_: 20	ΙU	;	
100-02	2-74-Nitrophenol		ŧυ	:	
132-64	1-9Dibenzofuran	_	ŧυ	:	
121-14	1-22,4-Dinitrotoluene	; 5	ŧυ	;	
84-66-	-2Diethylphthalate	5	ΙÜ	;	
7005-7	72-34-Chlorophenyl-phenylether_	; 5	ΙU	1	
86-73-	-7Fluorene	5	IU	;	
100-01	-64-Nitroaniline	20	ΙU	1	
	2-14,6-Dinitro-2-methylphenol_		ŧυ	;	
	-6N-Nitrosodiphenylamine (1)		ΙU	;	
101-55	5-34-Bromophenyl-phenylether	5	ŀυ	<b>†</b>	
118-74	1-1Hexachlorobenzene	5	ŧυ	;	
87-86-	-5Pentachlorophenol	20	ΙU	;	
	-8Phenanthrene		ΙU	;	
120-12	2-7Anthracene	 5	ŀυ	1	
84-74-	-2Di-n-Butylphthalate	 ; 5	ŀυ	;	
206-44	1-0Fluoranthene	5	ŀυ	:	
129-00	)-0Pyrene	_	: U	;	
	-7Butylbenzylphthalate	1 5	ŧυ	;	
	-13,3'-Dichlorobenzidine		; U	:	
	-3Benzo(a)Anthracene		ŧυ	;	
218-0	1-9Chrysene	5	ΙU	;	
117-8	1-7bis(2-Ethylhexyl)Phthalate_	5	ΙU	!	
	4-0Di-n-octylphthalate		ŧυ	;	
205-99	7-2Benzo(b)Fluoranthene	5	ŧυ	1	
207-08	3-9Benzo(k)Fluoranthene		١U	;	
	-8Benzo(a)Pyrene		ŀυ	3	
193-39	7-5Indeno(1,2,3-cd)Pyrene	5	ŧŪ	;	
53-70	-3Dibenz(a,h)Anthracene	<del>-</del> ; 5	ŧυ	;	
	4-2Benzo(g,h,i)Perylene		ΙŪ	;	
- · - <del>-</del>			}	:	
·				<del></del>	

<sup>(1) -</sup> Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

EDC18

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 00030902

Date Received: 03/17/00

Lab File ID: S030902

Date Extracted: 03/22/00

Sample volume: 1000 (ml)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

Number TICs found: O

; -	:	1		!	EST.	CONC.		- ;
;	CAS NUMBER	: COMPOUND	NAME	: RT	! (ug	g/L) :	: Q	;
! =	==========	======================================	========	=======	¦======= '		; =====	: :
; <u> </u>			<del></del>	i	·	i	·	- '

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EPA SAMPLE NO

LOW CONC WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Name: ENVIROSYSTEMS

Contract: 68-D7-0005

EDCJ9

Code: ENVSYS Case No.: 27876 SAS No.:

SDG No : EDCJ8

Lab Sample ID: 00030922

Date Received: 03/18/00

Date Extracted: 03/23/00

5 5 File ID: 5030922

mple volume: 1000 (ml)

Spricentrated Extract Volume: 1000 (ul)

Date Analyzed: 03/29/00 Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

CONCEN	TRATION
(110	/ t \

			CONCENTION		
	CAS NO.	COMPOUND	(ug/L)	G	
;				1	;
1	108-95-2	Phenol	5	10	;
;	111-44-4	bis(2-Chloroethyl)Ether	5	10	1
1		2-Chlorophenol	5	ŀυ	}
;	95-48-7	2-Methylphenol	; 5	; U	;
;		2,2'-oxybis(1-Chloropropane)_	: 5	ΙU	:
;		4-Methylphenol		ΙU	;
;	621-64-7	N-Nitroso-Di-n-Propylamine	5	١U	;
;	67-72-1	Hexachloroethane	5	; U	;
;	98-95-3	Nitrobenzene	: 5	١U	;
;	78-59-1	Isophorone	: 5	ΙU	;
;	88-75-5	2-Nitrophenol	: 5	ΙU	ł
;	105-67-9	2,4-Dimethylphenol	; 5	: U	;
1		bis(2-Chloroethoxy)Methane	; 5	ΙU	;
		2,4-Dichlorophenol	5	ŀυ	;
i		Naphthalene	: 5	ŀυ	;
i	106-47-8	4-Chloroaniline	: 5	١U	;
		Hexachlorobutadiene	: 5	!U	:
i		4-Chloro-3-Methylphenol	1 5	; U	1
i		2-Methylnaphthalene	; 5	ΙU	;
į		Hexachlorocyclopentadiene	. 5	ΙU	;
•		2, 4, 6-Trichlorophenol		ŀυ	;
		2, 4, 5-Trichlorophenol		ΙU	;
		2-Chloronaphthalene	5	ΙU	;
		2-Nitroaniline	1 20	١U	;
i		Dimethylphthalate		:υ	;
:		Acenaphthylene		ŀυ	;
•		2,6-Dinitrotoluene		ŀŪ	;
1		3-Nitroaniline		ŧΰ	
,		Acenaphthene	5	ίŪ	;
,	00 02 / 3444	Acenaph onene	1	!	
1			· · <del></del>		·

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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCJ9

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Date Received: 03/18/00

Lab Sample ID: 00030922 Lab File ID: S030922

Date Extracted: 03/23/00

Sample volume: 1000 (ml)

Date Analyzed: 03/29/00

Dilution Factor: 1.0 Concentrated Extract Volume: 1000 (ul)

Injection Volume: 1.0 (ul)

pH: 7.0

	•	CONCENTRATION	ı	
	CAS NO.	COMPOUND	(ug/L)	G
ì	;		!	1 1
;	51-28-5	2,4-Dinitrophenol	1 20	:U :
;	100-02-7	4-Nitrophenol	: 20	: 0 :
;	132-64-9	Dibenzofuran	5	; U ;
;	121-14-2	2,4-Dinitrotoluene	5	; U ;
¦	84-66-2	Diethylphthalate	.1 5	10 :
ì	7005-72-3	4-Chlorophenyl-phenylether	5	:U :
ļ	86-73-7	Fluorene	5	:U :
;	100-01-6	4-Nitroaniline	: 20	10 :
ļ	534-52-1	4,6-Dinitro-2-methylphenol	1 20	10 1
;	86-30-6	N-Nitrosodiphenylamine (1)	5	: U :
ì	101-55-3	4-Bromophenyl-phenylether	5	: U :
į	118-74-1	Hexachlorobenzene	1 5	10 1
;	87-86-5	Pentachlorophenol	; 20	; U ;
1	85-01-8	Phenanthrene	5	: U :
:	120-12-7	Anthracene	5	: 0 :
,	84-74-2	Di-n-Butylphthalate	5	:U :
ļ	206-44-0	Fluoranthene	5	; U ;
;	129-00-0	Pyrene	5	10 1
;	85-68-7	Butylbenzylphthalate	; 5	10 1
;	91-94-1	3,3'-Dichlorobenzidine	5	10 1
;	56-55-3	Benzo(a)Anthracene	: 5	: 0 :
ļ	218-01-9	Chrysene	5	: 0 :
;	117-81-7	bis(2-Ethylhexyl)Phthalate	5	10 1
;		Di-n-octylphthalate		IU I
i	205-99-2	Benzo(b)Fluoranthene	1 5	: 0 :
;	207-08-9	Benzo(k)Fluoranthene	; 5	:0 :
1	50-32-8	Benzo(a)Pyrene	5	: 0 :
;	193-39-5	Indeno(1,2,3-cd)Pyrene	5	: 0 :
;	53-70-3	Dibenz(a,h)Anthracene	. 5	:0 :
;	191-24-2	Benzo(g,h,i)Perylene	5	10
:			.!	_

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

EDCJ9

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No. : EDCJ8

Lab Sample ID: 00030922

Date Received: 03/18/00

Lab File ID: S030922

Date Extracted: 03/23/00

Sample volume: 1000 (ml)

Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

Number TICs found:

;		) 	· · · · · · · · · · · · · · · · · · ·	<b>1</b>	EST. CONC	. 1	;
;	CAS NUMBER	COMPOUND	NAME	: RT	(ug/L)	; G	:
! =	=======================================	=====================================		=======	==========	==   ===	== ;
١.		1		i	! !		;

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

**EDCKO** 

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: 5DG No.: EDCJ8

Lab Sample ID: 00030903 Date Received: 03/17/00

Lab File ID: S030903 Date Extracted: 03/22/00

Sample volume: 1000 (ml) Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (u1) pH: 7.0

			CONCENTRATION	4
	CAS NO.	COMPOUND	(ug/L)	Q
: -	;			; ;
;	108-95-2	-Phenol	5	IU ;
;	111-44-4	-bis(2-Chloroethul)Ether	5	:U :
t	95-57-8	-2-Chlorophenol	5	10 1
:	95-48-7	-2-Methylphenol	5	; U ;
;	108-60-1	-2,2'-oxybis(1-Chloropropane)_	5	10 1
:	106-44-5	-4-Methylphenol	5	10 1
ŀ	621-64-7	-N-Nitroso-Di-n-Propylamine	5	10 :
;	67-72-1	-Hexachloroethane	5	: U:
;	98-95-3	-Nitrobenzene	5	Ιυ Ι
:	78-59-1	-Isophorone	5	IU I
;	88-75-5	-2-Nitrophenol	5	: U :
:	105-67-9	-2,4-Dimethylphenol	5	:U :
;	111-91-1	-bis(2-Chloroethoxy)Methane	5	iu i
:	120-83-2	-2,4-Dichlorophenol	5	:U :
1	91-20-3	-Naphthalene	5	U
:	106-47-8	-4-Chloroaniline	5	:U :
!	87-68-3	-Hexachlorobutadiene	5	:U ;
ŀ	59-50-7	-4-Chloro-3-Methylphenol	5	ιυ :
ŧ	91-57-6	-2-Methylnaphthalene	5	ιυ :
;	77-47-4	-Hexachlorocyclopentadiene	5	10 ;
:	88-06-2	-2,4,6-Trichlorophenol	5	:U :
;	95-95-4	-2,4,5-Trichlorophenol	20	10 :
;	91-58-7	-2-Chloronaphthalene	5	:U :
;	88-74-4	-2-Nitroaniline	; 20	ιυ :
;	131-11-3	-Dimethylphthalate	5	; U ;
;	208-96-8	-Acenaphthylene	5	:U :
ţ	606-20-2	-2,6-Dinitrotoluene	5	1U 1
;	99-09-2	-3-Nitroaniline	: 20	(U)
:	83-32-9	-Acenaphthene	5	:U :
¦			1	_11

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCKO

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No. : EDCJ8

Lab Sample ID: 00030903

Date Received: 03/17/00

Lab File ID: S030903

Date Extracted: 03/22/00

Sample volume: 1000 (ml)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

CAS NO.	COMPOUND	CONCENTRATIO (ug/L)	O.
			<del></del>
51-28-5	2,4-Dinitrophenol	20	Ü
100-02-7	4-Nitrophenol	1 20	ΙU
132-64-9	Dibenzofuran	; 5	ŧυ
121-14-2	2,4-Dinitrotoluene	_ ; 5	١U
84-66-2	Diethylphthalate	5	: U
7005-72-3	4-Chlorophenyl-phenylether_	 ; 5	١U
86-73-7	Fluorene	_ ; 5	ΙU
100-01-6	4-Nitroaniline	20	: U
534-52-1	4,6-Dinitro-2-methylphenol	_; 20	ΙU
86-30-6	N-Nitrosodiphenylamine (1)	; 5	ŧυ
101-55-3	4-Bromophenyl-phenylether	5	ŀυ
118-74-1	Hexachlorobenzene		١U
87-86-5	Pentachlorophenol	; 20	:U
85-01-8	Phenanthrene	5	ŀυ
120-12-7	Anthracene	{	ΙU
84-74-2	Di-n-Butylphthalate	_; 5	; U
206-44-0	Fluoranthene	_; 5	l U
129-00-0	Pyrene	_; 5	ŀυ
85-68-7	Butylbenzylphthalate	_} 5	ŀυ
91-94-1	3,3'-Dichlorobenzidine	_; 5	; U
56-55-3	Benzo(a)Anthracene		ΙU
218-01-9	Chrysene	_; 5	! U
117-81-7	bis(2-Ethylhexyl)Phthalate	_; 5	! U
117-84-0	Di-n-octylphthalate	; 5	; U
205-99-2	Benzo(b)Fluoranthene	_	; U
207-08-9	Benzo(k)Fluoranthene	_; 5	; U
50-32-8	Benzo(a)Pyrene	_; 5	10
193-39-5	Indeno(1,2,3-cd)Pyrene	; 5	; U
	Dibenz(a,h)Anthracene		ŀυ
191-24-2	Benzo(g,h,i)Perylene	_ 1 5	: U
		<b>;</b>	1

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

**EDCKO** 

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS

Case No.: 27876

SAS No.:

SDG No.: EDCJB

Lab Sample ID: 00030903

Date Received:

03/17/00

EPA SAMPLE NO

Lab File ID:

5030903

Date Extracted: 03/22/00

Sample volume: 1000 (ml)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000

(U1)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

Number TICs found:

-												
;	;	1 1			1		;	EST.	CONC.	;		;
;	CAS NUMBER :	;	COMPOUND	NAME	;	RT	. ;	( u	g/L)	;	G	1
; =	=======================================	:===		=====	======;	=====	===;	=====	=====	= ;	====	;
1		¦		_	;		!			_1		;

LOW CONC WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

EDCK1

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS

Case No.: 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID:

00030904

Date Received: 03/17/00

Lab File ID

5030904

Date Extracted: 03/22/00

Sample volume:

1000 (m1)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume:

1. O (U1)

pH: 6.0

CONCENTRATION CAS NO. COMPOUND (ug/L) G 108-95-2----Phenol\_\_\_\_ 10 111-44-4-----bis(2-Chloroethyl)Ether\_\_\_\_ 5 10 | 95-57-8----2-Chlorophenol\_\_\_\_ 5 ΗU ! 95-48-7----2-Methylphenol 10 1 108-60-1----2, 2'-oxybis(1-Chloropropane) ; 5 10 ! 106-44-5----4-Methylphenol\_ 10 : 621-64-7----N-Nitroso-Di-n-Propylamine\_\_\_ 10 67-72-1----Hexachloroethane 10 | 98-95-3-----Nitrobenzene\_\_\_\_\_ 5 :U : 78-59-1-----Isophorone\_\_\_\_\_ 5 10 | 88-75-5----2-Nitrophenol\_ 5 10 5 : 105-67-9-----2, 4-Dimethylphenol ‡U ! 111-91-1-----bis(2-Chloroethoxy)Methane\_\_\_ 5 ΙU | 120-83-2----2,4-Dichlorophenol \_ \_\_\_\_ 10 | 91-20-3-----Naphthalene 5 HU 106-47-8----4-Chloroaniline\_\_\_\_ 10 | 87-68-3-----Hexachlorobutadiene 5 10 : 59-50-7-----4-Chloro-3-Methylphenol\_\_\_\_  $\pm U$ : 91-57-6----2-Methylnaphthalene\_ 5 10 : 77-47-4-----Hexachlorocyclopentadiene\_\_\_ 5 10 5 ! 88-06-2----2, 4, 6-Trichlorophenol\_\_\_\_ 10 : 95-95-4----2,4,5-Trichlorophenol\_\_\_\_ 20 ΙU ! 91-58-7----2-Chloronaphthalene\_\_\_\_ 10 5 | 88-74-4----2-Nitroaniline\_\_\_\_\_ 10 20 : 131-11-3-----Dimethylphthalate\_\_\_\_ 10 5 : 208-96-8-----Acenaphthylene\_ 5 : U | 606-20-2----2,6-Dinitrotoluene\_\_\_\_\_ 5 :U | 99-09-2----3-Nitroaniline\_\_\_\_\_ 20 10 10

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W CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

EDCK1

Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Code: ENVSYS

Case No.: 27876

SAS No. :

SDG No.: EDCJ8

Sample ID:

00030904

Date Received:

03/17/00

File ID:

5030904

Date Extracted: 03/22/00

ole volume:

centrated Extract Volume: 1000

Date Analyzed:

03/28/00

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1000 (ml)

(u1)

Dilution Factor: 1.0

ection Volume:

1.0 (ul)

6.0 pH:

> CONCENTRATION (ug/L)

CAS NO.

COMPOUND

51-28-5-----2, 4-Dinitrophenol\_\_\_\_ 20 10 100-02-7----4-Nitrophenol\_\_\_\_ 20 : U

| 121-14-2----2, 4-Dinitrotoluene\_\_\_ : 84-66-2----Diethylphthalate 1 7005-72-3----4-Chlorophenyl-phenylether\_

: 86-73-7-----Fluorene\_\_\_\_ 100-01-6----4-Nitroaniline\_

| 132-64-9-----Dibenzofuran\_

: 534-52-1----4,6-Dinitro-2-methylphenol\_ | 86-30-6----N-Nitrosodiphenylamine (1)\_\_ : 101-55-3----4-Bromophenyl-phenylether\_\_\_

118-74-1----Hexachlorobenzene\_\_\_\_ | 87-86-5----Pentachlorophenol | 85-01-8-----Phenanthrene\_\_\_\_

: 120-12-7-----Anthracene\_\_\_ | 84-74-2----Di-n-Butylphthalate\_\_\_\_

| 206-44-0----Fluoranthene\_\_\_\_ : 129-00-0----Pyrene\_

| 85-68-7----Butylbenzylphthalate\_ | 91-94-1----3,3'-Dichlorobenzidine | 56-55-3-----Benzo(a)Anthracene

218-01-9-----Chrysene\_\_ 117-81-7----bis(2-Ethylhexyl)Phthalate\_\_

: 117-84-0----Di-n-octylphthalate\_\_\_\_ 205-99-2----Benzo(b)Fluoranthene\_\_\_\_

: 207-08-9-----Benzo(k)Fluoranthene\_\_\_\_ | 50-32-8----Benzo(a)Pyrene\_\_\_\_

193-39-5----Indeno(1,2,3-cd)Pyrene\_\_\_ 53-70-3-----Dibenz(a,h)Anthracene\_\_\_\_ 191-24-2----Benzo(g,h,i)Perylene\_\_\_\_

(1) - Cannot be separated from Diphenylamine

n= 0400

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

EDCKE

ab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

ab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No. : EDCJB

ab Sample ID: 00030905

Date Received: 03/17/00

ab File ID: S030905

Date Extracted: 03/22/00

ample volume: 1000 (ml)

Date Analyzed: 03/28/00

oncentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

njection Volume: 1.0 (ul)

pH: 7.0

umber TICs found: O

	_		:	;					;	EST. CONC.	:		;
CA	S	NUMBER	i.	:	COMPOUND	NAME		RT	1	(ug/L)		Q	;
====	==	=====	====	: : =		—	===== ;			==========			
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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

**EDCK3** 

SDG No.: EDCJ8

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

03/17/00 Date Received:

Lab Sample ID: 00030906

Lab File ID: S030906 Date Extracted: 03/22/00

Sample volume: 1000 (ml) Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

pH: 7.0 Injection Volume: 1.0 (ul)

	CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
1	;			
;	108-95-2	-Phenol	5	IU :
;	111-44-4	-bis(2-Chlaroethyl)Ether	5	:U :
;	95-57-8	-2-Chlorophenol	5	10 1
:	95-48-7	-2-Methylphenol	: 5	IU :
		-2,2'-oxybis(1-Chloropropane)_		10 !
;	106-44-5	-4-Methylphenol	1 5	:U :
;	621-64-7	-N-Nitroso-Di-n-Propylamine	<b>.</b> 5	:U :
:	67-72-1	-Hexachloroethane	5	: U :
ŧ	98-95-3	-Nitrobenzene	5	: U :
;	78-59-1	-Isophorone	5	:U :
;	88-75-5	-2-Nitrophenol	5	10 :
;	105-67-9	-2,4-Dimethylphenol	5	; U ;
:		-bis(2-Chloroethoxy)Methane	; 5	10 :
;		-2,4-Dichlorophenol		(U
1	91-20-3	-Naphthalene	; 5	10 :
;	106-47-8	-4-Chloroaniline	; 5	:U :
;	87-68-3	-Hexachlorobutadiene	; 5	10 :
;	59-50-7	-4-Chloro-3-Methylphenol	; 5	:U :
;	91-57-6	-2-Methylnaphthalene	: 5	1U 1
:	77-47-4	-Hexachlorocyclopentadiene	5	10 1
;	88-06-2	-2, 4, 6-Trichlorophenol	; 5	10 1
1	95-95-4	-2, 4, 5-Trichlorophenol	: 20	10 :
;		-2-Chloronaphthalene	: 5	:U :
1	88-74-4	-2-Nitroaniline	; 20	:0 :
1	131-11-3	-Dimethylphthalate	5	ιυ ι
1	208-96-8	-Acenaphthylene	; 5	:U :
;	606-20-2	-2,6-Dinitrotoluene	5	iŪ ;
i	99-09-2	-3-Nitroaniline	20	10
ij	83-32-9	Acenaphthene	5	10
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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

: EDCK3

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJB

Lab Sample ID: 00030906

Date Received: 03/17/00

Lab File ID: S030906

Date Extracted: 03/22/00

Sample volume: 1000 (ml)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

	CAS NO. COMPOUND		CONCENTRATION (ug/L)	G A
,				1 1
i	51-28-5	2,4-Dinitrophenol	, ¦ 20	
	100-02-7	4-Nitrophenol	20	iu i
:	132-64-9	Dibenzofuran	5	IU :
!	121-14-2	2,4-Dinitrotoluene	5	10 1
;	84-66-2	Diethylphthalate		10
;	7005-72-3	4-Chlorophenyl-phenylether	5	IU I
;	86-73-7	Fluorene	5	10 :
;	100-01-6	4-Nitroaniline	20	10 :
;	534-52-1	4,6-Dinitro-2-methylphenol	: 20	:U :
;	86-30-6	N-Nitrosodiphenylamine (1)	5	10 1
t	101-55-3	4-Bromophenyl-phenylether	5	:U :
;	118-74-1	Hexachlorobenzene	5	:U :
;	87-86-5	Pentachlorophenol	; 20	ιυ :
;	85-01-8	Phenanthrene	; 5	: U :
ï	120-12-7	Anthracene	; 5	: U :
;	84-74-2	Di-n-Butylphthalate	; 5	10 1
ï	206-44-0	Fluoranthene	; 5	:U :
;	129-00-0	Pyrene	; 5	:U :
;	85-68-7	Butylbenzylphthalate	; 5	: U
į	91-94-1	3,3'-Dichlorobenzidine	; 5	: U:
ţ	56-55-3	Benzo(a)Anthracene	; 5	: U :
ļ	218-01-9	Chrysene	: 5	10 :
1	117-81-7	bis(2-Ethylhexyl)Phthalate	5	10 :
ŀ	117-84-0	Di-n-octylphthalate	: 5	: U
i	205-99-2	Benzo(b)Fluoranthene	: 5	ιυ :
;	207-08-9	Benzo(k)Fluoranthene	5	:U :
;	50-32-8	Benzo(a)Pyrene	5	(U )
;	193-39-5	Indeno(1,2,3-cd)Pyrene	5	: U
ì	53-70-3	Dibenz(a,h)Anthracene	5	: 0:
:		Benzo(g,h,i)Perylene	5	10 1
1	<del></del>		' <del></del>	_'

1LCF

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

EDCK3

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 00030906

Date Received: 03/17/00

Lab File ID: S030906

Date Extracted: 03/22/00

Sample volume: 1000 (ml)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

Number TICs found: O

													_
1		;	;			1		1	EST.	CONC.	;		1
;	CAS	NUMBER	;	COMPOUND	NAME	;	RT	;	( u g	)/L)	1	G	;
:	=====	======	===	==========	=====	=====	======	==	======	=====	= ; =	====	: ;
1						I_					_:_		;

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCK4

Lab Name: ENVIROSYSTEMS Contract. 68-D7-0005

....

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030907

Date Received: 03/17/00

Lab File ID: S030907

Date Extracted: 03/22/00

Sample volume: 1000 (ml)

Date Analyzed: 03/28/00

CONCENTRATION

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

O (U1) pH: 7.0

		CONCENTRALIE	J) 4	
CAS NO.	COMPOUND	(ug/L)	G	
<del></del>		!		;
108-95-2	Phenol	5	! U	1
111-44-4	bis(2-Chloroethyl)Ether	5	1 U	1
95-57-8	2-Chlorophenol	; 5	: U	;
95-48-7	2-Methylphenol	; 5	١U	!
108-60-1	2,2'-oxybis(1-Chloropropane)_	5	:υ	:
106-44-5	4-Methylphenol	1 5	! U	;
621-64-7	N-Nitroso-Di-n-Propylamine	: 5	ΙU	;
67-72-1	Hexachloroethane	5	; U	;
98-95-3	Nitrobenzene	5	١U	
78-59-1	Isophorone	: 5	: U	1
88-75-5	2-Nitrophenol	5	١U	;
105-67-9	2,4-Dimethylphenol	5	: U	}
	bis(2-Chloroethoxy)Methane	5	ťυ	;
120-83-2	2,4-Dichlorophenol	1 5	١U	+
91-20-3	Naphthalene	: 5	ŧυ	;
106-47-8	4-Chloroaniline	5	ŀυ	;
87-68-3	Hexachlorobutadiene	5	١٠	;
59-50-7	4-Chloro-3-Methylphenol	5	: U	;
91-57-6	2-Methylnaphthalene	5	; U	;
77-47-4	Hexachlorocyclopentadiene	1 5	: U	;
88-06-2	2, 4, 6-Trichlorophenol	5	; U	1
95-95-4	2, 4, 5-Trichlorophenol	; 20	ΙU	1
	2-Chloronaphthalene		١U	1
	2-Nitroaniline		ΙU	;
131-11-3	Dimethylphthalate	. 5	ΙU	;
208-96-8	Acenaphthylene	5	ŀυ	;
606-20-2	2,6-Dinitrotoluene	5	ΙU	;
99-09-2	3-Nitroaniline	1 20	ΙÜ	;
83-32-9	Acenaphthene	5	ŀŪ	;
! !		· .	1	;

1LCC

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

EDCK4

SDG No.: EDCJB

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

Lab Sample ID: 00030907 Date Received: 03/17/00

Lab File ID: S030907 Date Extracted: 03/22/00

Sample volume: 1000 (ml) Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul) pH: 7.0

			CONCENTRATION	ų.
	CAS NO.	COMPOUND	(ug/L)	G
;	;	الله المراجعية والمراجعة المراجعية والمراجعة المراجعة والمراجعية والمراجعة المراجعة المراجعية والمراجعين والمراجعين	! !	; ;
;	51-28-5	-2,4-Dinitrophenol	1 20	:υ :
;	100-02-7	-4-Nitrophenol	<u> </u>	:U :
1	132-64-9	-Dibenzofuran	; 5	10 1
;	121-14-2	-2,4-Dinitrotoluene	1 5	10 ;
;	84-66-2	-Diethylphthalate	<b>:</b> 5	10 1
1	7005-72-3	-4-Chlorophenul-phenulether	; 5	10 1
1	86-73-7	-Fluorene	5	10 1
í	100-01-6	-4-Nitroaniline	1 20	10 1
;	534-52-1	-4,6-Dinitro-2-methylphenol	20	10 1
;	86-30-6	-N-Nitrosodiphenylamine (1)	; 5	:U :
;	101-55-3	-4-Bromophenyl-phenylether	5	10 1
;	118-74-1	-Hexachlorobenzene	; 5	(U )
;	87-86-5	-Pentachlorophenol	: 50	10 1
i	85-01-8	-Phenanthrene	5	:U :
ï	120-12-7	-Anthracene	; 5	:U :
;	84-74-2	-Di-n-Butylphthalate	; 5	10 1
;	206-44-0	-Fluoranthene	: 5	10 1
1	129-00-0	-Pyrene	5	:U :
;	85-68-7	-Butylbenzylphthalate	; 5	10 1
;	91-94-1	-3,3'-Dichlorobenzidine	5	:U :
;	56-55-3	Benzo(a)Anthracene	.1 5	10 1
ł	218-01-9	Chrysene	. 5	10 1
;	117-81-7	bis(2-Ethylhexyl)Phthalate	; 5	:U :
ř	117-84-0	Di-n-octylphthalate	1 5	1U ;
;	205-99-2	Benzo(b)Fluoranthene	; 5	10 1
;	207-08-9	Benzo(k)Fluoranthene	5	; U ;
!	50-32-8	Benzo(a)Pyrene	5	:U :
;	193-39-5	Indeno(1,2,3-cd)Pyrene	. 5	: U :
ł	53-70-3	Dibenz(a,h)Anthracene	5	: U :
		Benzo(g,h,i)Perylene	5	10 1
;				!!
(	1) - Cannot be s	separated from Diphenylamine		

1LCF

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

EDCK4

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No. : EDCJB

Lab Sample ID: 00030907

Date Received: 03/17/00

Lab File ID: S030907

Date Extracted: 03/22/00

Sample volume: 1000 (ml)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

Number TICs found: 0

;			;	<u> </u>	EST.	CONC.	;	- ;
;	CAS NUMBER :	COMPOUND NAME	;	RT :	(ug	g/L)	; Q	;
; =	=======================================		====   =	===== ;	======		=====	= ;
; -			; _	;			!	_;

1LCB

LDW CONC WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

EDCK5

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

\_\_\_\_

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030908 Date Received: 03/17/00

Lab File ID: S030908 Date Extracted: 03/23/00

Sample volume: 1000 (ml) Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul) pH: 6.0

			CONCENTRATION	I
	CAS NO.	COMPOUND	(ug/L)	G
;	;			<del></del>
ľ	108-95-2	-Phenol	5	10
;	111-44-4	-bis(2~Chloroethyl)Ether	5	10 :
;	95-57-8	-2-Chlorophenol	5	10 :
ì	95-48-7	-2-Methylphenol	5	; U ;
1	108-60-1	-2,2'-oxybis(1-Chloropropane)	5	:U :
;	106-44-5	-4-Methylphenol	5	; U ;
;	621-64-7	-N-Nitroso-Di-n-Propylamine	5	; U ;
;	67-72-1	-Hexachloroethane	5	; U ;
1	98-95-3	-Nitrobenzene	5	10 1
;	78-59-1	-Isophorone	5	; U ;
1	88-75-5	-2-Nitrophenol	5	:U :
1	105-67-9	-2,4-Dimethylphenol	5	(U )
;	111-91-1	-bis(2-Chloroethoxy)Methane	5	: U :
i	120-83-2	-2,4-Dichlorophenol	5	; U ;
;	91-20-3	-Nachthalene	5	1U :
;	106-47-8	-4-Chloroaniline	5	; U ;
1	87-68-3	-Hexachlorobutadiene	5	; U ;
1	59-50-7	-4-Chloro-3-Methylphenol	5	1U 1
;	91-57-6	-2-Methylnaphthalene	5	; U ;
j	77-47-4	-Hexachlorocyclopentadiene	5	: U:
ŀ	88-06-2	-2,4,6-Trichlorophenol	5	IU I
ļ	95-95-4	-2, 4, 5-Trichlorophenol	! 20	iù i
;	91-58-7	-2-Chloronaphthalene	5	:U :
;	88-74-4	-2-Nitroaniline	20	10 1
1	131-11-3	-Dimethylphthalate	; 5	10 1
:	208-96-8	-Acenaphthylene	: 5	10 1
;	606-20-2	-2,6-Dinitrotoluene	5	IU i
:	99-09-2	-3-Nitroaniline	20	i U
;	83-32-9	-Acenaphthene	5	Ü
;		The Elite printers and a second	:	1
•				- · <del> ·</del> '

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCK5

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS

Case No : 27876

SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 00030908

Date Received:

03/17/00

Lab File ID:

Date Extracted: 03/23/00

S03090B

Date Analyzed: 03/29/00

Sample volume: 1000 (ml)

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 6.0

CONCENTRATION CAS NO. COMPOUND (uq/L) Q | 51-28-5----2,4-Dinitrophenol\_\_\_\_ 20 10 | 100-02-7----4-Nitrophenol\_\_\_\_ 20 10 1 132-64-9-----Dibenzofuran 5 10 ! 121-14-2----2, 4-Dinitrotoluene ;U 84-66-2----Diethylphthalate\_\_\_ 10 : 7005-72-3----4-Chlorophenyl-phenylether\_ 10 : 86-73-7----Fluorene\_\_ 5  $\mathbf{H}$ 100-01-6----4-Nitroaniline 20 10 : 534-52-1----4,6-Dinitro-2-methylphenol 20 10 : 86-30-6----N-Nitrosodiphenylamine (1)\_\_\_ 5 HU : 101-55-3----4-Bromophenyl-phenylether 5 10 : 118-74-1-----Hexachlorobenzene\_\_\_\_ 10 : 87-86-5----Pentachlorophenol\_\_\_\_ 20 10 : 85-01-8-----Phenanthrene\_\_\_\_ 10 120-12-7----Anthracene\_\_\_\_ 5 lU : 84-74-2----Di-n-Butylphthalate\_\_\_\_ 10 : 205-44-0-----Fluoranthene\_\_\_\_ 10 129-00-0----Pyrene\_ 10 5 : 85-68-7----Butylbenzylphthalate\_\_\_ :11 | 91-94-1----3,3'-Dichlorobenzidine\_\_\_\_ 10 : 56-55-3----Benzo(a)Anthracene\_\_\_\_ lU 218-01-9-----Chrysene\_\_\_\_ 10 1 117-81-7-----bis(2-Ethylhexyl)Phthalate\_\_ 5 10 117-84-0----Di-n-octylphthalate\_\_\_\_ 1 U : 205-99-2----Benzo(b)Fluoranthene\_\_\_\_ 5 10 : 207-08-9----Benzo(k)Fluoranthene\_\_\_\_ 5 10 : 50-32-8-----Benzo(a)Pyrene\_\_\_\_ 10 1 193-39-5-----Indeno(1, 2, 3-cd)Pyrene\_\_\_\_ HU | 53-70-3-----Dibenz(a,h)Anthracene IU : 191-24-2----Benzo(g,h,i)Perylene\_\_\_\_ 10

(1) - Cannot be separated from Diphenylamine

1LCF

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDCK5

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No. : EDCJ8

EPA SAMPLE NO.

Lab Sample ID: 00030908

Date Received:

03/17/00

Lab File ID: S030908

Date Extracted: 03/23/00

Sample volume: 1000 (ml)

Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 6.0

Number TICs found:

EST. CONC.

CAS NUMBER 

COMPOUND NAME

RT

(ug/L)

0:0453

ILCB

LOW CONC WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

| EDCK6

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030909 Date Received: 03/17/00

Lab File ID: 5030909 Date Extracted: 03/23/00

Sample volume: 1000 (ml) Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul) pH: 6.0

			CONCENTRATION	1	
	CAS NO.	COMPOUND	(ug/L)	G	
;	:		1	}	-;
;	108-95-2	-Phenol	; 5	! U	;
1	111-44-4	-bis(2-Chloroethyl)Ether	5	: U	:
ļ	95-57-8	-2-Chlorophenol	: 5	: U	;
ļ	95-48-7	-2-Methylphenol	; 5	! U	}
i	108-60-1	2,2'-oxybis(1-Chloropropane)_	; 5	; U	;
1	106-44-5	4-Methylphenol	; 5	; U	1
;	621-64-7	-N-Nitroso-Di-n-Propylamine	; 5	; U	;
ŀ	67-72-1	Hexachloroethane	: 5	! U	1
1	98-95-3	Nitrobenzene	5	ŀυ	;
1	78-59-1	Isaaharane	1 5	l U	;
;	88-75-5	2-Nitrophenol	; 5	! U	;
í	105-6/-9	2,4-Dimethylphenol	: 5	: U	;
;	111-91-1	bis(2-Chloroethoxy)Methane	; 5	! U	;
;	120-83-2	2,4-Dichlorophenol	; 5	: U	i
1	91-20-3	Naphthalene	1 5	; U	}
;	106-47-8	4-Chloroaniline	; 5	l U	;
ì	87-68-3	Hexachlorobutadiene	.; 5	; U	}
ť	59-50-7	4-Chloro-3-Methylphenol	5	IU	1
;	91-57-6	2-Methylnaphthalene	; 5	: U	;
ì	77-47-4	Hexachlorocyclopentadiene	.; 5	: U	;
1	88-06-2	2,4,6-Trichlorophenol	.1 5	: U	;
ļ	95-95-4	2,4,5-Trichlorophenol	1 20	: U	;
;	91-58-7	2-Chloronaphthalene	5	l U	;
ļ	88-74-4	2-Nitroaniline	1 20	10	:
;	131-11-3	Dimethylphthalate	; 5	¦ U	1
;	208-96-8	Acenaphthylene	.; 5	!U	;
;	909-50-5	2,6-Dinitrotoluene	;\ 5	! U	;
1	99-09-2	3-Nitroaniline	; 20	: U	1
;	83-32-9	Acenaphthene	5	; U	;
\$			1	. !	_;

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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: 27876

EPA SAMPLE NO

EDCK6

SDG No.: EDCJ8

Lab Name: ENVIROSYSTEMS

00030909

5030909

Concentrated Extract Volume: 1000

Contract: 68-D7-0005

SAS No. :

Date Received: 03/17/00

·

Date Extracted: 03/23/00

Sample volume: 1000 (ml)

Date Analyzed: 03/29/00

(ul)

Dilution Factor: 1.0

Injection Volume:

Lab Code: ENVSYS

Lab Sample ID:

Lab File ID:

1. Q (ul)

pH: 6.0

CONCENTRATION CAS NO. COMPOUND (ug/L) G | 51-28-5----2, 4-Dinitrophenol 20 :0 100-02-7----4-Nitrophenol 20 ΙU | 132-64-9-----Dibenzofuran\_\_\_ 5 10 | 121-14-2----2, 4-Dinitrotoluene\_ 5 :U 84-66-2----Diethylphthalate\_\_\_ 5 ΙU 1 7005-72-3----4-Chlorophenyl-phenylether\_ 10 86-73-7----Fluorene 5 ΙU 1 100-01-6-----4-Nitroaniline\_ 50 10 | 534-52-1----4,6-Dinitro-2-methylphenol\_ ΙU 20 | 86-30-6----N-Nitrosodiphenylamine (1) 10 : 101-55-3-----4-Bromophenyl-phenylether\_\_\_ 5 ιU : 118-74-1-----Hexachlorobenzene\_\_\_\_ 5 10 87-86-5----Pentachlorophenol 20 :U | 85-01-8----Phenanthrene 10 5 | 120-12-7----Anthracene\_ 5 : U | 84-74-2----Di-n-Butylphthalate\_\_\_\_ 5 10 206-44-0----Fluoranthene\_\_\_\_ 5 10 | 129-00-0----Purene\_\_\_\_ 5 : U | 85-68-7----Butylbenzylphthalate\_ 5 10 | 91-94-1----3,3'-Dichlorobenzidine\_\_\_\_ 5 :U | 56-55-3----Benzo(a)Anthracene\_\_\_\_ 10 | 218-01-9----Chrysene\_ 5 10 1 117-81-7-----bis(2-Ethylhexyl)Phthalate\_ 5 10 | 117-84-0----Di-n-octylphthalate\_\_\_\_ 5 10 205-99-2----Benzo(b)Fluoranthene\_\_\_\_ 5 10 : 207-08-9----Benzo(k)Fluoranthene\_\_\_ 5 : U | 50-32-8----Benzo(a)Pyrene\_\_\_\_ 5 10 193-39-5----Indeno(1,2,3-cd)Pyrene\_\_ 5 : 0 | 53-70-3-----Dibenz(a,h)Anthracene\_\_\_\_ 5 10 1 191-24-2----Benzo(g,h,i)Perylene\_\_\_\_ 10 (1) - Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

EDCK6

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

SDG No. : EDCJ8

Lab Sample ID: 00030909

Lab Code: ENVSYS Case No.: 27876 SAS No.:

Date Received: 03/17/00

Lab File ID: S030909

Date Extracted: 03/23/00

Sample volume: 1000 (ml)

Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 6.0

Number TICs found: 0

						<del></del>				00110	<del></del>		
iri		:	1'			i		i	EST.	CUNC.	i		i
;	CAS	NUMBER	;	COMPOUND	NAME	!	RT	;	(ug	/L)	;	O.	1
} :	====	=======	===	=======================================	=====	=====;	======	= ; =	=====	=====	= ;	====	;
;			i			:		_			_;		;

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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCK8

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030923 Date Received: 03/18/00

Lab File ID: S030923 Date Extracted: 03/23/00

Sample volume: 1000 (ml) Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul) pH: 7.0

			CONCENTRATION	4	
	CAS NO.	COMPOUND	(ug/L)	G	
;	;			<del> </del>	
;	108-95-2	-Phenol	5	10 1	
:	111-44-4	-bis(2-Chloroethul)Ether	5	10 1	
;	95-57-8	-2-Chlorophenol	5	:U ;	
1	95-48-7	-2-Methylphenol	5	10 ;	
;	108-60-1	-2,2'-oxybis(1-Chloropropane)_	5	10 :	
;	106-44-5	-4-Methylphenol	: 5	10 :	
;	621-64-7	-N-Nitroso-Di-n-Propylamine	5	:U :	
;	67-72-1	-Hexachloroethane	5	10 1	
i	98-95-3	-Nitrobenzene	5	10 1	
1	78-59-1	-Isophorone	5	10 1	
;	88-75-5	-2-Nitrophenol	5	10 1	
;	105-67-9	-2,4-Dimethylphenol	5	10 1	
;	111-91-1	-bis(2-Chloroethoxy)Methane	5	10 1	
;	120-83-2	-2,4-Dichlorophenol	5	; U ;	
ì	91-20-3	-Naphthalene	5	:0 :	
ï	106-47-8	-4~Chloroaniline	: 5	10 1	
i	87-68-3	-Hexachlorobutadiene	5	:U :	
1	59-50-7	-4-Chloro-3-Methylphenol	5	:0 :	
;	91-57-6	-2-Methylnaphthalene	; 5	: :	
;	77-47-4	-Hexachlorocyclopentadiene_	! 5	; U ;	
¦	88-06-2	-2,4,6-Trichlorophenol	5	IU I	
j	95-95-4	-2,4,5-Trichlorophenol	: 20	ιυ :	;
;	91-58-7	-2-Chloronaphthalene	5	; U ;	1
;	88-74-4	-2-Nitroaniline	: 20	:U :	;
1	131-11-3	-Dimethylphthalate	5	10 1	;
;	208-96-8	-Acenaphthylene	; 5	: U :	;
;	606-20-2	-2,6-Dinitrotoluene	5	: 0 :	;
÷	99-09-2	3-Nitroaniline	; 20	: 0 :	;
ì	83-32-9	-Acenaphthene	; 5	10 :	:
1			;	!!	•

LOW CONC WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

EDCK8

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 00030923

Date Received: 03/18/00

Lab File ID: S030923

Date Extracted: 03/23/00

Sample volume: 1000 (ml)

Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

			CONCENTRATIO	N
	CAS NO.	COMPOUND	(ug/L)	Q
;	;		:	1
;	51,-28-5	2,4-Dinitrophenol	; 20	10 1
;	100-02-7	4-Nitrophenol	1 20	: U
ì	132-64-9	Dibenzofuran	1 5	10 :
;	121-14-2	2,4-Dinitrotoluene	; 5	10 1
;	84-66-2	Diethylphthalate	; 5	: U
ł	7005-72-3	4-Chlorophenyl-phenylether	5	(U)
;	86-73-7	Fluorene	5	ιυ :
;	100-01-6	4-Nitroaniline	; 20	: U :
ļ	534-52-1	4,6-Dinitro-2-methylphenol	1 20	:U :
;	86-30-6	N-Nitrosodiphenylamine (1)	; 5	10 :
;	101-55-3	4-Bromophenyl-phenylether	: 5	10 1
;	118-74-1	Hexachlorobenzene	.1 5	10 1
;	87-86-5	Pentachlorophenol	30	ιυ :
1	85-01-8	Phenanthrene	. 5	:U :
;	120-12-7	Anthracene	; 5	10 1
;	84-74-2	Di-n-Butylphthalate	; 5	10 1
;	206-44-0	Fluoranthene	.1 5	10 :
;	129-00-0	Pyrene	; 5	ιυ :
;	85-68-7	Butylbenzylphthalate	;; 5	10 1
i	91-94-1	3,3'-Dichlorobenzidine	.1 5	:U :
1	56-55-3	Benzo(a)Anthracene		; U ;
;	218-01-9	Chrysene	5	; U ;
ŀ	117-81-7	bis(2-Ethylhexyl)Phthalate	. 5	:U :
;	117-84-0	Di-n-octylphthalate	_	10 1
;	205-99-2	Benzo(b)Fluoranthene	_; 5	10 1
;	207-08-9	Benzo(k)Fluoranthene	_	Ιυ Ι
;	50-32-8	Benzo(a)Pyrene	_	: U
;	193-39-5	Indeno(1,2,3-cd)Pyrene	_	10 1
;		Dibenz(a,h)Anthracene		: U
1	191-24-2	Benzo(g,h,i)Perylene	_1 5	; U ;
;	·		_	!!
(	1) - Cannot be	separated from Diphenylamine		

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

EDCK8

Lab Name: ENVIROSYSTEMS

Case No.: 27876 SAS No.:

Contract: 68-D7-0005

SDG No.: EDCJ8

Lab Sample ID: 00030923

Lab Code: ENVSYS

Date Received:

03/18/00

Lab File ID:

5030923

Date Extracted: 03/23/00

Sample volume: 1000 (ml)

Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000

(ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

Number TICs found: 0

;		;	;		<del></del>	!		E	EST.	CONC.	1		- }
1	CAS	NUMBER	:	COMPOUND	NAME	; R	T	:	( u g	]/L)	1	G	)
; =	=====	=======	-;======	========	=========	:====	====	' ===	=====	=====	=	====	: ;
; _			_ i			!				<del></del>	_		- ;

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

: EDCK9

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 00030910

Date Received: 03/17/00

Lab File ID: S030910

Date Extracted: 03/23/00

Sample volume: 1000 (ml)

Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

			CONCENTRATION	I
	CAS NO.	COMPOUND	(ug/L)	G
;			1	; ;
;	108-95-2	-Phenol	5	10 1
1	111-44-4	-bis(2-Chloroethyl)Ether	5	10 !
;	95-57-8	-2-Chlorophenol	5	:U :
1	95-48-7	-2-Methylphenol	; 5	10 1
1	108-60-1	-2,2'-oxybis(1-Chloropropane)	5	10 !
;	106-44-5	-4-Methylphenol	5	10 :
:	621-64-7	-N-Nitroso-Di-n-Propylamine	5	: U :
;	67-72-1	-Hexachloroethane	5	: U :
1	98-95-3	-Nitrobenzene	5	: U
1	78-59-1	-Isophorone	5	10 1
- }	88-75-5	-2-Nitrophenol	5	10 1
ł	105-67-9	-2,4-Dimethylphenol	; 5	10 ;
;	111-91-1	-bis(2-Chloroethoxy)Methane	5	: U
1	120-83-2	-2,4-Dichlorophenol	5	: U :
;	91-20-3	-Naphthalene	; 5	10 1
}	106-47-8	-4-Chloroaniline	5	ιυ ι
i	87-68-3	-Hexachlorobutadiene	; 5	:U :
;	59-50-7	-4-Chloro-3-Methylphenol	5	10 1
!	91-57-6	-2-Methylnaphthalene	: 5	10 1
;	77-47-4	-Hexachlorocyclopentadiene	; 5	10 1
i	88-06-2	-2,4,6-Trichlorophenol	5	10 1
;	95-95-4	-2,4,5-Trichlorophenol	30	10 :
1	91-58-7	-2-Chloronaphthalene	5	10 1
;	88-74-4	-2-Nitroaniline	: 50	U
;	131-11-3	-Dimethylphthalate	; 5	10 1
:	208-96-8	-Acenaphthylene	5	10 ;
;	606-50-5	-2,6-Dinitrotoluene	; 5	10 1
;	99-09-2	-3-Nitroaniline	: 20	10 1
;	83-32-9	-Acenaphthene	5	10 1
;		1	!	_

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LOW CONC WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCK9

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Case No.: 27876

SDG No.: EDCJB

Lab Sample ID: 00030910

03/17/00 Date Received:

Date Extracted: 03/23/00

Sample volume: 1000 (m1)

Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000

5030910

(ul)

SAS No.:

Dilution Factor: 1.0

Injection Volume:

Lab Code: ENVSYS

Lab File ID:

1.0 (ul)

7.0 pH:

CONCENTRATION CAS NO. COMPOUND (ug/L) G 51-28-5----2, 4-Dinitrophenol\_\_\_\_\_ 20 10 : 100-02-7----4-Nitrophenol\_\_\_\_ 20 : U : 132-64-9-----Dibenzofuran\_\_\_ 5 : U | 121-14-2----2, 4-Dinitrotoluene \_\_\_\_ 5 10 : 84-66-2----Diethylphthalate\_\_\_\_ 5 10 1 7005-72-3----4-Chlorophenyl-phenylether\_\_ 5 10 | 86-73-7----Fluorene\_ 5 10 100-01-6-----4-Nitroaniline 20 10 1 534-52-1-----4,6-Dinitro-2-methylphenol\_\_ 50 10 : 86-30-6----N-Nitrosodiphenylamine (1)\_\_\_ : U 101-55-3----4-Bromophenyl-phenylether\_\_\_\_ 5 10 : 118-74-1-----Hexachlorobenzene\_\_\_\_ 5 IU 20 : U : 87-86-5----Pentachlorophenol | 85-01-8-----Phenanthrene\_\_\_\_ HU 5 | 120-12-7------Anthracene\_\_\_\_ 5 : U | 84-74-2--- ----Di-n-Butylphthalate\_\_\_\_\_ 10 206-44-0----Fluoranthene\_\_\_\_ : U 129-00-0-----Purene 5 : U : 85-68-7----Butylbenzylphthalate\_\_\_\_ 32 ; B 5 10 | 91-94-1----3,3'-Dichlorobenzidine\_\_\_\_\_ : 56-55-3----Benzo(a)Anthracene\_\_\_\_ 5 : U : 218-01-9-----Chrysene\_\_ 5 10 : 117-81-7-----bis(2-Ethylhexyl)Phthalate\_\_\_ 5 : U | 117-84-0----Di-n-octylphthalate\_\_\_\_ : U : 205-99-2----Benzo(b)Fluoranthene\_\_\_\_ 5 : U : 207-08-9-----Benzo(k)Fluoranthene\_\_\_\_ 5 10 5 10 | 50-32-8-----Benzo(a)Pyrene 5 10 : 193-39-5-----Indeno(1,2,3-cd)Pyrene\_\_\_\_ : U 1 53-70-3-----Dibenz(a,h)Anthracene\_\_\_\_\_ : U 1 191-24-2----Benzo(g, h, i)Perylene\_\_\_\_\_ (1) - Cannot be separated from Diphenylamine

1LCF

LOW CONG. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

EDCK9

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.: SDG No.: EDCJ8

Lab Sample ID: 00030910 Date Received: 03/17/00

Lab File ID: S030910 Date Extracted: 03/23/00

Sample volume: 1000 (ml) Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul) pH: 7.0

Number TICs found: O

; , -		;	!	<del></del>		:		<del> </del>	EST.	CONC.	:		1
;	CAS I	NUMBER	1	COMPOUND	NAME	}	RT	!	(ug	/L)	;	G	1
; =	=====	=======	=======	=======		!===	=====	;===	=====	=====	;==	===	;
'			·			*		. '			·		,

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

**EDCLO** 

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

SDG No.: EDCJ8

Lab Code: ENVSYS Case No.: 27876 SAS No.:

Date Received: 03/17/00 Lab Sample ID: 00030911

Lab File ID: S030911 Date Extracted: 03/23/00

Sample volume: 1000 (ml) Date Analyzed: 03/29/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul) pH: 7.0

	CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q	
!	;		:	;	:
;	108-95-2	Phenol	5	: U	1
;	111-44-4	bis(2-Chloroethyl)Ether		ΙU	1
;	95-57-8	2-Chlorophenol	1 5	10	;
;	95-48-7	2-Methylphenol	5	10	;
1	108-60-1	2,2'-oxybis(1-Chloropropane)_	5	! U	;
ì	106-44-5	4-Methylphenol	5	١U	;
;	621-64-7	N-Nitroso-Di-n-Propulamine	5	:U	;
;	67-72-1	Hexachloroethane	5	ŀυ	ì
;	98-95-3	Nitrobenzene	: 5	:U	1
;	78-59-1	Isophorone	; 5	ŀυ	;
ì	88-75-5	2-Nitrophenol	: 5	IU	1
i	105-67-9	2,4-Dimethylphenol	: 5	ΙU	;
ì	111-91-1	bis(2-Chloroethoxy)Methane	: 5	IU	1
i	120-83-2	2,4-Dichlorophenol	5	:U	;
ì	91-20-3	Naphthalene	1 5	ŀυ	1
1	106-47-8	4-Chloroaniline	5	ΙU	1
;	87-68-3	Hexachlorobutadiene	5	ΙU	;
1	59-50-7	4-Chloro-3-Methylphenol	5	ΙU	:
1	91-57-6	2-Methylnaphthalene	5	ΙU	;
;	77-47-4	Hexachlorocyclopentadiene	; 5	:U	;
;	88-06-2	2,4,6-Trichlorophenol	5	ΙU	i
;	95-95-4	2,4,5-Trichlorophenol	; 20	١U	;
;	91-58-7	2-Chloronaphthalene	5	١U	;
;	88-74-4	2-Nitroaniline	20	; U	ł
ţ	131-11-3	Dimethylphthalate	5	ΙU	;
ļ	208-96-8	Acenaphthylene	5	:U	;
;	909-50-5	2,6-Dinitrotoluene	; 5	ΙU	1
;	99-09-2	3-Nitroaniline	; 20	ΙU	1
;	83-32-9	Acenaphthene	5	ŀυ	;
;			1	_;	;

LOW CONC WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

EDCLO

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJB

Lab Sample ID: 00030911

Date Received: 03/17/00

Lab File ID: S030911

Date Extracted: 03/23/00

Date Analyzed: 03/29/00

Sample volume: 1000 (ml)

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

(1) - Cannot be separated from Diphenylamine

pH: 7.0

			CONCENTRATION		WALL
CAS	3 NO.	COMPOUND	(ug/L)	G)	4/4/0-
;	· · · · · · · · · · · · · · · · · · ·		1	;	;
517	-28-5	2,4-Dinitrophenol	_; 20	; U	:
100	0-02-7	4-Nitrophenol	_; 20	l U	<b>;</b>
1 132	2-64-9	Dibenzofuran	_	l U	;
121	1-14-2	2,4-Dinitrotoluene	5	l U	i
: 84-	-66-2	Diethylphthalate	_	l U	;
700	05-72-3	4-Chlorophenyl-phenylether	_; 5	l U	1
1 86-	-73-7	Fluorene	_: 5	l U	;
100	0-01-6	4-Nitroaniline	_; 20	l U	1
		4,6-Dinitro-2-methylphenol		!U	1
1 86-	-30-6	N-Nitrosodiphenylamine (1)	_1 5	:U	<b>†</b>
1 10:	1-55-3	4-Bromophenyl-phenylether	_; 5	!U	:
1 118	3-74-1	Hexachlorobenzene	: 5	l U	;
: 87-	-86-5	Pentachlorophenol	1 20	l U	;
1 85-	-01-8	Phenanthrene	5	: U	ţ
1 120	0-12-7	Anthracene	- 5	ΙU	;
: 84-	-74-2	Di-n-Butylphthalate	_; 5	; U	;
1 206	6-44-0	Fluoranthene	5	IU	;
1 129	9-00-0	Pyrene	: 5	ΙU	j j
: 85	-68-7	Butylbenzylphthalate	26	BU	;
		3,3'-Dichlorobenzidine		ιυ .	i
1 56	-55-3	Benzo(a)Anthracene	5	! U	;
1 219	8-01-9	Chrysene	5	; U	;
1 11	7-81-7	Chrysene bis(2-Ethylhexyl)Phthalate	5	ΙU	1
111	7-84-0	Di-n-octylphthalate	5	l U	;
		Benzo(b)Fluoranthene		ΙU	;
		Benzo(k)Fluoranthene		ΙU	;
		Benzo(a)Pyrene		ΙU	1
: 19	3-39-5	Indeno(1,2,3-cd)Pyrene		:U	1
		Dibenz(a,h)Anthracene		ίŪ	ł i
		Benzo(g,h,i)Perylene		ΙŪ	;
;		District Property of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of	_	!	;

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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO ..

**EDCLO** 

Lab Name: ENVIROSYSTEMS

Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJB

Dilution Factor: 1.0

Lab Sample ID: 00030911

Date Received: 03/17/00

Lab File ID: S030911

Date Extracted: 03/23/00

Sample volume: 1000 (ml)

Concentrated Extract Volume: 1000 (ul)

Date Analyzed: 03/29/00

Injection Volume: 1.0 (ul)

pH: 7.0

Number TICs found: 0

														-
ì		÷	;			!	;		;	EST.	CONC.	;		ì
;	CAS	NUMBER	1	COMPOUND	NAME	;	;	RT	!	( ບ ຽ	1/L)	;	Q	;
;	=====		;===		=====	======	===	=====	; =	======	=====	== :	=====	: ;
i			:				:		!			;		;

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- LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

EDCL4

Lab Name: ENVIROSYSTEMS Contract: 68-D7-0005

Lab Code: ENVSYS Case No.: 27876 SAS No.:

SDG No.: EDCJ8

Lab Sample ID: 00030924

Date Received: 03/18/00

Lab File ID: S030924

Date Extracted: 03/22/00

Sample volume: 1000 (ml)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul) Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

			CONCENTRATIO	V
	CAS NO.	COMPOUND	(ug/L)	Q
;	;			;
;	108-95-2	Phenol	5	1U 1
1	111-44-4	bis(2-Chloroethul)Ether	; 5	10 1
;	95-57-8	2-Chlorophenol	; 5	10 1
;	95-48-7	2-Methylphenol	; 5	(U )
;	108-60-1	2,2'-oxybis(1-Chloropropane)_	; 5	; U ;
!	106-44-5	4-Methylphenol	; 5	(U )
1	621-64-7	N-Nitroso-Di-n-Propylamine	: 5	10 :
;	67-72-1	Hexachloroethane	; 5	(U )
;	98-95-3	Nitrobenzene	; 5	1U 1
;	78-59-1	Isophorone	: 5	1U 1
1	88-75-5	2-Nitrophenol	; 5	10 1
;	105-67-9	2,4-Dimethylphenol	; 5	10 1
;	111-91-1	bis(2-Chloroethoxy)Methane	5	lU i
•	120-83-2	2,4-Dichlorophenol	5	(Ú )
1	91-20-3	Naphthalene	5	10
	106-47-8	4-Chloroaniline	5	IU I
;	87-68-3	Hexachlorobutadiene	; 5	: U :
;	59-50-7	4-Chloro-3-Methylphenol	5	(U (
;	91-57-6	2-Methylnaphthalene	; 5	10
;	77-47-4	Hexachlorocyclopentadiene	; 5	10 1
:	88-06-2	2,4,6-Trichlorophenol	; 5	IU :
;	95-95-4	2,4,5-Trichlorophenol	; 20	IU :
ţ	91-58-7	2-Chloronaphthalene	5	10 ;
;	88-74-4	2-Nitroaniline	1 20	IU I
1	131-11-3	Dimethylphthalate	5	10 1
1	208-96-8	Acenaphthylene	. 5	:U :
!	909-50-5	2,6-Dinitrotoluene	5	i U
	99-09-2	3-Nitroaniline	20	10 1
:	83-32-9	Acenaphthene	. 5	; U ;
!		neenaph onene		
•			· ————————————————————————————————————	-··

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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

EDCL4

Lab Name. ENVIROSYSTEMS Contract: 68-D7-0005

SDG No.: EDCJ8

Lab Code: ENVSYS Case No.: 27876 SAS No.:

Lab Sample ID: 00030924

Date Received: 03/18/00

Lab File ID: S030924

Date Extracted: 03/22/00

Sample volume: 1000 (ml)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

immetion Volume: 1.0 (ul)

pH: 7.0

CAS NO. COMPOUND (ug/L) Q				CONCENTRATION	l
51-28-52, 4-Dinitrophenol   20   U     100-02-74-Nitrophenol   20   U     132-64-9Dibenzofuran   5   U     121-14-22, 4-Dinitrotoluene   5   U     84-66-2Diethylphthalate   5   U     84-66-2Diethylphthalate   5   U     7005-72-34-Chlorophenyl-phenylether   5   U     86-73-7Fluorene   20   U     100-01-64-Nitroaniline   20   U     534-52-14, 6-Dinitro-2-methylphenol   20   U     86-30-6N-Nitrosodiphenylamine (1)   5   U     101-55-34-Bromophenyl-phenylether   5   U     118-74-1		CAS NO.	COMPOUND	(ug/L)	G
100-02-7	;	:		!	1 ;
100-02-7	;	51-28-5	2,4-Dinitrophenol	: 20	:U :
132-64-9	;	100-02-7	4-Nitrophenol	; 20	10 1
121-14-22.4-Dinitrotoluene	;	132-64-9	Dibenzofuran	5	IU
84-66-2	;	121-14-2	2,4-Dinitrotoluene	; 5	; U ;
7005-72-34-Chlorophenyl-phenylether	,	84-66-2	Diethylphthalate	; 5	10 1
100-01-64-Nitroaniline	1	7005-72-3	4-Chlorophenul-phenulether_	; 5	10 1
100-01-64-Nitroaniline	;	86-73-7	Fluorene	; 5	; U ;
534-52-1	ł	100-01-6	4-Nitroaniline	1 20	10 1
101-55-34-Bromophenyl-phenylether	ì	534-52-1	4,6-Dinitro-2-methylphenol		10 1
118-74-1	;	86-30-6	N-Nitrosodiphenylamine (1)	: 5	10 1
118-74-1	ļ	101-55-3	4-Bromophenyl-phenylether	; 5	: U :
87-86-5	;	118-74-1	Hexachlorobenzene	: 5	10 1
85-01-8	1	87-86-5	Pentachlorophenol	: 20	10 1
120-12-7Anthracene	ŀ	85-01-8	Phenanthrene	: 5	10 1
84-74-2Di-n-Butylphthalate	;	120-12-7	Anthracene	1 5	10 :
206-44-0	1	84-74-2	Di-n-Butylphthalate	5	ιυ :
129-00-0	;	206-44-0	Fluoranthene	: 5	10 1
85-68-7Butylbenzylphthalate	1	129-00-0	Pyrene	; 5	:0 :
91-94-13, 3'-Dichlorobenzidine	;	85-68-7	Butylbenzylphthalate	; 20	1
56-55-3Benzo(a)Anthracene	;	91-94-1	3,3'-Dichlorobenzidine	5	(U )
218-01-9Chrysene	1	56-55-3	Benzo(a)Anthracene	5	:U :
117-81-7bis(2-Ethylhexyl)Phthalate	;	218-01-9	Chrysene	5	10 1
117-84-0Di-n-octylphthalate	1	117-81-7	bis(2-Ethylhexyl)Phthalate	5	10 1
205-99-2Benzo(b)Fluoranthene	-	117-84-0	Di-n-octylphthalate	5	:U :
207-08-9Benzo(k)Fluoranthene	;	205-99-2	Benzo(b)Fluoranthene	5	: U :
50-32-8Benzo(a)Pyrene	;	207-08-9	Benzo(k)Fluoranthene	5	10 1
193-39-5Indeno(1,2,3-cd)Pyrene	;	50-32-8	Benzo(a)Pyrene	5	:0 :
53-70-3Dibenz(a,h)Anthracene	1	193-39-5	Indeno(1,2,3-cd)Pyrene	5	: U :
191-24-2Benzo(g,h,i)Perylene	;	53-70-3	Dibenz(a,h)Anthracene	; 5	:U :
· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · _ · · _ · · _ · _ · _ · _ · · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ ·	;	191-24-2	Benzo(q,h,i)Perylene	5	ιυ :
	;			<b>}</b>	_!!

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

EDCL4

Lab Name: ENVIROSYSTEMS

Contract 68-D7-0005

SDG No.: EDCJ8

Lab Code: ENVSYS Case No. 27876 SAS No.

Date Received: 03/18/00

Lab Sample ID: 00030924

Lab File ID: S030924

Date Extracted: 03/22/00

Sample volume: 1000 (ml)

Date Analyzed: 03/28/00

Concentrated Extract Volume: 1000 (ul)

Dilution Factor: 1.0

Injection Volume: 1.0 (ul)

pH: 7.0

Number TICs found: O

4					EST. CONC.	t 1	. }
;	CAS NUMBER	COMPOUND	NAME	RT	(ug/L)	; Q	;
1	=======================================	=======================================	=========	======	=========	:=====	;
1				i	¦	. :	;

## FINITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

## ESD Central Regional Laboratory Data Tracking Form for Contract Samples

Sample Delivery Group: EDCJ S	CERCLIS No: 1ND 98¢ 5¢¢ 292
Case No: 27876	Site Name/Location: HIMCO DUMP FL (1
Contractor or EPA Lab: ENVS	Data User: USEPA
No. of Samples: 20	Date Sampled or Date Received: 4-3-2000
Have Chain-of-Custody records been re Have traffic reports or packing lists bee If no, are traffic report or packing list no YesNo  If no, which traffic report or packing list ;————————————————————————————————————	umbers written on the Chain-of-Custody Record?
Are basic data forms in? Yes / No of samples claimed: 20	o No. of samples received:2O
Received by: a. C. Harvey	1 ESAT Date: 4-3-2000
Received by LSSS: a. C Harv	ESAT   Date: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-2000   Page: 4-3-20
Review started: 4/3/00	Reviewer Signature: Man Wiffer
Total time spent on review: 12,5  Copied by: Copied by:	Date review completed: $4/8/60$ $1/8/60$ Date: $1/8/60$ Lyon $1/8/60$ Date: $1/8/60$
DATA USER: Please till in the blanks below and retur Sylvia Grittin, Data Mgmt. Cod	n this form to:
Data received by:	Date:
Data review received by:	Date:
Inorganic Data Complete Organic Data Complete Dioxin data Complete SAS Data Complete	[] Suitable for Intended Purpose [] ✓ if OK [] Suitable for Intended Purpose [] ✓ if OK [] Suitable for Intended Purpose [] ✓ if OK [] Suitable for Intended Purpose [] ✓ if OK
	why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files. Date:

### Regional Transmittal Form

### JUN 0 7 2000

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	
SUBJECT:	Review of Data Received for Review on 5-10-00
FROM:	Stephen L. Ostrodka, Chief (SMF-4J)  Superfund Field Services Section  Data User:  USEPA  G/5/03
TO:	Data User: USEPA 6/5/03
We have revie	wed the data for the following case:
SITE NAME:	HIMCO LANDFILL (IN)
CASE NUMB	er: 27986 sdg number: EDPK9
Number and T	ype of Samples: 16 (WATER)
Sample Numb	ers: EDPK9, EDPLO-9, EDPHO-5
Laboratory:	PDP Hrs for Review: 10,5
Following are	an acceptate and usable unt to
Mfin	Two deciled in the thatel unrature
•	Ardinal Jaguil

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J

LABORATORY: PDP ANALYTICAL SERV.

Page 2 of 8

SDG: EDPK9 CASE: 27986

SITE: HIMCO LANDFILL

This review covers sixteen (16) low concentration water samples, numbered EDPK9, EDPLO - EDPL9, EDPMO - EDPM2, EDPM4 and EDPM5, were collected on 04/17 and 18/00. The PDP Analytical Services, of Woodlands, TX received the samples on 04/19/00, in good condition. The samples were analyzed for low concentration VOAs and SVOAs. All samples were analyzed per CLP SOW OLCO2.1.

Sample EDPM4 and EDPM5 are Trip Blanks and analyzed for volatiles only.

Laboratory Control Samples (LCS) Identified as VLCS54 and VLCS55 (VOAs) and SLCS60 (SVOA) were analyzed in place of matrix spike/matrix spike duplicate (MS/MSD) samples.

The VOA samples were analyzed within the holding time of fourteen (14) days for preserved water samples and the SVOA samples were extracted within the required holding time of seven days. The analysis of the semivolatile extracts were performed within forty (40) days. Therefore, the results for the VOA and SVOA fractions are acceptable.

The reviewer's narrative and data qualifiers are noted in the following pages.

Reviewed by: W. Ira Wilson Lockheed-Martin/ESAT

Date: \_\_May 25, 2000

LABORATORY: PDP ANALYTICAL SERV.

Page 3 of  $\checkmark$ 

SDG: EDPK9 CASE: 27986

SITE: HIMCO LANDFILL

Below is a summary of the out-of-control audits and the possible effect on the data for this case.

#### 1. HOLDING TIME

This review covers sixteen (16) low concentration water samples, numbered EDPK9, EDPLO - EDPL9, EDPMO - EDPM2, EDPM4 and EDPM5 were collected on 04/17 and 18/00. The PDP Analytical Services, of Woodlands, TX received the samples on 04/19/00 in good condition. The samples were analyzed for low concentration VOAs and SVOAs. All samples were analyzed per CLP SOW OLCO2.1.

The VOA samples were analyzed within the holding time of fourteen (14) days for preserved water samples; therefore, the results are acceptable.

The SVOA samples were extracted within the holding time of seven (7) days. The extracts were promptly analyzed within the required 40 days criteria. Therefore; the results are acceptable.

#### 2. GC/MS TUNING AND GC PERFORMANCE

GC/MS tuning complied with the mass list and ion abundance criteria for BFB and DFTPP.

#### 3. CALIBRATION

Initial and continuing calibration standards of VOA and SVOA were evaluated for the Target Compounds List (TCL) and outliers were recorded on the outlier forms included as a part of this narrative.

#### 4. METHOD BLANK

Blanks VBLK54 and VBLK55 are the low concentration water Volatile Method Blanks. The Method Blanks were clean, no TCLs or TICs reported. Blank VHBLK01 is identified as a Holding Blank sample which was also clean.

Reviewed by: W. Ira Wilson Lockheed-Martin/ESAT

Date: May 25, 2000

LABORATORY: PDP ANALYTICAL SERV.

Page 4 of 8

SDG: EDPK9

CASE: 27986

SITE: HIMCO LANDFILL

Blanks SBLK27 is the low conc. water Semivolatile Method Blank. Blank SBLK27 reported no TCLs and no TICs.

Please refer to Form-IV LCV and Form-IV LCSV for a list of associated samples.

#### 5. SURROGATE RECOVERY AND SYSTEM MONITORING COMPOUNDS

The low concentration recovery of the system monitoring spiking Compound (BFB = Bromofluorobenzene) for the volatile analysis and the surrogate compounds for the semivolatile analysis met the required QC limits for all samples. Therefore, all results are acceptable.

#### 6. MATRIX SPIKE/MSD SAMPLES

A Laboratory Control (LCS) Samples identified as VLCS54 and VLCS55 (for volatiles) and SLCS60 (for semivolatile) were used in place of a matrix spike/matrix spike duplicate sample for the low concentration analysis. All spike recoveries were within the QC limits and the results are acceptable.

#### 7. FIELD BLANK AND FIELD DUPLICATE

Sample EDPM4 and EDPM5 are Trip Blanks and analyzed for volatiles only. The samples reported a detectable amount of Methylene Chloride at  $0.5\mu g/L$  and  $0.9\mu g/L$ , respectively, and no TICs.

#### 8. INTERNAL STANDARD

The internal standard retention times and area counts for the low concentration volatile and semivolatile samples were within the required QC limits; therefore, the results are acceptable.

#### 9. COMPOUND IDENTIFICATION

Target compounds and TICs were correctly identified by "best fit"

Reviewed by: W. Ira Wilson Lockheed-Martin/ESAT

Date: May 25, 2000

LABORATORY: PDP ANALYTICAL SERV.

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SDG: EDPK9

CASE: 27986

SITE: HIMCO LANDFILL

library search method.

#### 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

VOA and SVOA Target Compounds (TCLs) and Tentative Identified Compounds (TICs) were properly quantitated; therefore, the results are acceptable.

#### 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

#### 12. ADDITIONAL INFORMATION

None

Reviewed by: W. Ira Wilson Lockheed-Martin/ESAT

Date: May 25, 2000

#### PDP ANALYTICAL SERVICES

1680 Lake Front Circle, Suite B • The Woodlands, TX 77380 • Phone (281)363-2233

Contract No. 68-D7-0004	Case No. 27986	SDG No. EDPK9
L		L

#### **SDG NARRATIVE**

MAY 1 0 2000

#### **SAMPLE RECEIPT:**

04/19/00 @ 09:02 A.M. - Received two shipments consisting of two coolers:Cooler 1 temperature : 4°C. Cooler 2 temperature : 4°C (COC391562, COC391563, COC391564, COC391565)contained the following:

EDPK9 - 2-1L Amber, 3-40mL Voa Vials.

EDPL0 - 2-1L Amber, 3-40mL Voa Vials.

EDPL1 - 2-1L Amber, 3-40mL Voa Vials.

EDPL2 - 2-1L Amber, 3-40mL Voa Vials.

EDPL3 - 2-1L Amber, 3-40mL Voa Vials.

EDPL4 - 2-1L Amber, 3-40mL Voa Vials.

EDPL5 - 2-1L Amber, 3-40mL Voa Vials.

EDPL6 - 2-1L Amber, 3-40mL Voa Vials.

EDPL7 - 2-1L Amber, 3-40mL Voa Vials.

EDPL8 - 2-1L Amber, 3-40mL Voa Vials.

EDPL9 - 2-40mL Voa Vials.

EDPM0 - 2-1L Amber, 3-40mL Voa Vials(1-40mL Voa received broken).

EDPM4 - 2-40mL Voa Vials.

04/20/00 @ 09:04 A.M. - Received one shipment consisting of two coolers:Cooler 1 temperature : 4°C. Cooler 2 temperature : 4°C (COC391566) contained the following:

EDPM1 - 2-1L Amber, 3-40mL Voa Vials.

EDPM2 - 2-1L Amber, 3-40mL Voa Vials.

EDPM5 - 2-40mL Voa Vials.

No other problems were encountered during sample receipt.

#### **VOLATILES:**

All samples were analyzed on a HP 5973 GC/MS using a 60 meters long DB-624 column having a 0.53mm ID and 3um film thickness. The trap used was a OV-1/Tenax/Silica Gel (Tekmar #6. Cat 14-1755-003). A 20 mL purge volume was used for all samples, blanks and standards. The concentrations of the standards and spikes were maintained at the levels required by the Statement of Work (SOW).

The following field samples are analyzed for volatiles in this SDG. The pH of the samples is listed against then

EDPK9	2.0	EDPL6	2.0	EDPM1 2.0	
EDPL0	2.0	EDPL7	2.0	EDPM2 2.0	
EDPL1	2.0	EDPL8	2.0	EDPM5 4.0	
EDPL2	2.0	EDPL9	2.0	annu	11

#### PDP ANALYTICAL SERVICES

1680 Lake Front Circle, Suite B • The Woodlands, TX 77380 • Phone (281)363-2233

F		
Contract No. 68-D7-0004	Case No. 27986	SDG No. EDPK9
Contract 110. 00-D /-0004	Case 110. 27300	ODG No. EDITE
ll .		l l

#### **SDG NARRATIVE**

EDPL3	2.0	EDPM0	2.0
EDPL4	2.0	EDPM4	2.0
EDPL5	2.0		

Manual integration's were performed for the following samples for the compounds listed against them.

VSTD00158 - Acetone, 2-Hexanone, 1,2-Dibromo-3-chloropropane, 1,2,4-Trichlorobenzene.

VSTD00258 – 1,2-Dibromo-3-chloropropane, 1,2,4-Trichlorobenzene.

VSTD00563 – Bromomethane, Chloroethane, Acetone, Carbon Tetrachloride, Bromoform, 1,2-Dibromochloropropane.

VBLK77 – 1,4-Difluorobenzene.

EDPK9 – Methylene Chloride, cis-1,2-Dichloroethene.

EDPL1 - 1,1-Dichloroethane.

EDPL6 – 1,1-Dichloroethane.

These manual integration's were necessary because the software failed to accurately integrate the entire peak. In all the above instances, the quantitation reports are flagged with "m". A hard copy printout of the manual integration's along with the scan ranges and initials of the operator is included in the data package. For those target compounds with low signals that required a manual search for the initial calibration, the analysts has performed the same manual search for every sample analysis to ensure that false negative results are not reported. All peaks in the calibration standards, samples and QC samples are checked manually to ensure that the software has correctly identified and integrated the peaks.

No problems were encountered during sample analysis.

#### **SEMIVOLATILES:**

The following samples were extracted using continuous liquid/liquid extraction method on 04/23/00

EDPK9, EDPL0, EDPL1, EDPL2, EDPL3, EDPL4, EDPL5, EDPL6, EDPL7, EDPL8, EDPM0, EDPM1, EDPM2

All samples were analyzed on a HP 5973 GC/MS using a 30 meters long and 0.25mm ID DB-5 column . A 2uL injection was used.

'anual integration's were performed for the following samples for the compounds listed against them.

SSTD00502 – Indeno(1,2,3-cd)pyrene.

SSTD01002 - Indeno(1,2,3-cd)pyrene.

SSTD02002 - Indeno(1,2,3-cd)pyrene

SSTD05002 – Indeno(1,2,3-cc)pyrene.

MANAGENTY

#### PDP ANALYTICAL SERVICES

1680 Lake Front Circle, Suite B • The Woodlands, TX 77380 • Phone (281)363-2233

Contract No. 68-D7-0004 Case No. 27986 SDG No. EDPK9

#### **SDG NARRATIVE**

SSTD08002 – Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene.

SSTD02005 – 2,2'-oxybis(1-Chloropropane), Indeno(1,2,3-cd)pyrene.

SSTD02006 – 2,2'-oxybis(1-Chloropropane), Indeno(1,2,3-cd)pyrene.

These manual integration's were necessary because the software failed to accurately integrate the entire peak. In all the above instances, the quantitation reports are flagged with "m". A hard copy printout of the manual integration's along with the scan ranges and initials of the operator is included in the data package. For those target compounds with low signals that required a manual search for the initial calibration, the analysts has performed the same manual search for every sample analysis to ensure that false negative results are not reported. All peaks in the calibration standards, samples and QC samples are checked manually to ensure that the software has correctly identified and integrated the peaks.

No problems were encountered during sample extraction and sample analysis.

nies / Occordinator

I certify that this data package is in compliance with the terms and conditions of the contract, both technically a for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature:

Signature and Title

Date of Signature

Z:\NETDATA\QA\FORMS\CLP\NARR1296.DOC

## Sample Delivery Group (SDG) Traffic Report (TR) Cover Sheet

(High	•	er in last ship	oment of samples received under SI in alphanumeric order)  EDPL9
2.	EDPL0		EDPM0
3.	EDPL1	13.	EDPM1
4.	EDPL2	14.	EDPM2
5.	EDPL3	15.	EDPM4
6.	EDPL4	16.	EDPM5
7.	EDPL5		
8.	EDPL6	****	
9.	EDPL7		
10.	EDPL8		
<b>N</b> T-4	There are a maximum	of 20 field or	omnles in an SDG

										(DO! O!D	-					
			LO	N CONC	ENTRA		Page 1 o	OLATILE					, .			
CASEISAS# 2798 COLUMN. DG 6 24 HEATED PURGE(YN):						,	bage 10	, 	LABORA	TORY	PDPA	mela	ہے کہ	$\mathscr{P} \geq$	,cru	10
COLUMN DB 6 Z4									SITENAM	E. A	MICE	2 11	ANDI	FILL		` -
HEATED PURGE(Y/N):					, )								.,			
				لماست	سيدين									· . ——		
nsiciment 5973 Date Time:		Initial cal.		000	Contin.	cai	<b></b> .	Cantin C	Cal.		Contin. C	Cal.		Contin.	Cal.	
P#V5913					4/2/	00 2	2/5	+						<del></del>		
Date/Time:		4/14/00	-100	7	4/20	100 -	949	4/24/	CO - 9	149	<del></del>	1/2				
	#		%rsd		17 **	%d	-	n' /	1%d	<del></del>	rf	D <sub>0</sub> <sup>c</sup>	<del></del>	п	%d	Ψ.
Chioromethane	0.01	0.578			2.747	128 4	15	0.664	1							$\perp$
Bromethane	0.10				ļ		<u> </u>		<u> </u>				<del></del>		$\bot$	1
Vinyl chlonde	0.10				<u> </u>	ļ	<u> </u>								$\bot$	1
Chloroethane	0.01				<u> </u>											$\perp$
Methylene chlonde	0.01					<u> </u>								ļ		
Acetone	0.01				<u> </u>	I										
Carbon disulfide	0.01				I	I										$\perp$
1,1-Dichloroethene	0.10						I							1		$oldsymbol{\mathbb{T}}$
1.1-Dichloroethane	0.20							I			_[					T
cis-1,2-Dichloroethene	0.10								I			Ī				T
trans-1,2-Dichloroethene	0.10					T							T		1	T
Chirotorm	0.20	1													T	T
1,2-Dichloroethane	0.10									1						$\top$
2-Butanone	0.01												$\top$		1	T
Bromochloromethane	0.05															1
1,1,1-Trichloroethane	0.10															T
Carpon tetrachionde	0.10	7													T	1
Brmodichloromethane	0.20					F								T	$\top$	_
1.2-Dichloropropane	0.01												T		T	, -
cis-1,3-Dichloropropene	0.20	1														
Inchloroethene	0.30										Ì		1		1	$\vdash$
Dibromochioromethane	0.10											T	T		T	Т
1,1,2-trichloroethane	0.10									1			1		1	$\vdash$
Benzene	0.40								ĺ				T		$\top$	
trans-1,3-Dichloropropene	0.10															
Bromotorm	0.05	0.224			0284	21.8	r	0.201								
4-Methyl-2-Pentanone	0.01	7 7 7								T			1	1		
2-hexanone	0.01											1	1		<del>                                     </del>	
Tetracnioroethene	0.10											T			T .	
1,1.2.2-Tetrachioroethane	0.10	1		· · · · · · · · · · · · · · · · · · ·												
1,2-Dibromoethane	0.10									T			T			Г
Toluene	0.40			1	7						Ţ		1			$\overline{}$
Chioropenzene	0.50									1						$\overline{}$

Samples affected:	VBLK 54	VBLK55	
	VLCS 54	VL CS 55	
	EDPL7-L9	EDPK9	
	EDPMO-M2	VBLK.55 VL: CS 55 EDPK9 EDPL <b>1</b> - L6	
	EDPM4	VHBUKOI	
	EOPM5		
		<u></u>	

0,064

057179.1

Reviewer's Init/Date 5/25/08

0.10

0.30

0.40

0.40

0.40

0.40

0.20

0.055

Ethylbenzene Styrene Xylene (total)

1,3-Dichlarabenzene

1,4-Dichloropenzene

1.2-Dichlorobenzene

1,2,4-Inchloropenzene

4-Bromofluorobenzene

1.2-Dibromo-3-chioropropane 0.10

J/R= All positive results are estimated "J" and non-detected results are unusable "R"

<sup>\*\* =</sup> These flags should be applied to the analytes on the sample data sheets

#### CALIBRATION OUTLIER LOW CONCENTRATION WATER SEMIVOLATILE TCL COMPOUNDS

		_	-		-			_				
							(	1	age	İ	αí	2)

CASE'SAS#: 217986 COLUMN:

TCL COMPOUNDS

LABORATORY: P.DP ANAlytical
SITE NAME: HIMCO LANDFILL

Date/Time:     #	rf   rf	/oc - /0   % rsd	•					v - 72	27   *		%d	=	rf	%d	
#   Phenol     0.80   Dis(2-chioroethyl) Ether     0.70   Phenol       0.70   Phenol	rf   rf	% rsd	•		%d			%d       				1 1	rī	%d	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.70   10.7	01 01 01 01 01 01 01 01 01 01 01 01									1			1		1 1 1 1 1 1 1
2-Chlorophenol   0.70 2-Methylphenol   10.70 2-Y-Oxybis(1-chl-propane)   10.01 2-Y-Oxybis(1-chl-propane)   10.01 2-Methylphenol   10.60 N-nitroso-di-n-propylamine   10.50 Hexachloroethane   10.30 Nitrobenzene   10.20 sophorone   10.40 2-Nitrophenol   10.10 2-Dimethylphenol   10.20 2-Chloroethoxyl)methane   10.30 2-Dichlorophenol   10.20 Naphtaiene   10.70 2-Chloroaniline   10.01 2-Methylphenol   10.20 2-Methylphenol   10.20 2-Methylphenol   10.20 2-Methylphenol   10.20 2-Methylphenol   10.20 2-Chloroaniline   10.01 2-4.6-Trichlorophenol   10.20 2-Chloronaphthalene   10.30 2-Chloronaphthalene   10.30 2-Chloronaphthalene   10.30 2-Chloronaphthalene   10.30 2-Chloronaphthalene   10.30 3-Nitroaniline   10.01 Acenaphthylphenol   10.20 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Nitroaniline   10.30	D    D    D    D    D    D    D    D									1					!
Methylphenol   10.70   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60   10.60	0												! ! !		!
2.2'-Oxvbis(1-chl-propane)   0.01								-					1		!
Methylphenol   0.60 N-nitroso-di-n-propylamine   10.50 Hezachloroethane   10.30 Nitrobenzene   10.20 sophorone   10.40 L-Dimethylphenol   10.20 Dis-2-chloroethoxyl)methane   10.30 L-Dichlorophenol   10.20 Dis-2-chloroethoxyl)methane   10.30 L-Dichlorophenol   10.20 Naphthalene   10.70 L-Chloroaniline   10.01 L-Chloroaniline   10.01 L-Methylphenol   10.20 L-Methylphenol   10.20 L-Methylphenol   10.20 L-Methylphenol   10.20 L-Methylphenol   10.20 L-Methylphenol   10.20 L-Methylphenol   10.20 L-Methylphenol   10.20 L-Methylphenol   10.20 L-Chloronaphthalene   10.30 L-Chloronaphthalene   10.30 L-Chloronaphthylphenol   10.20 L-Chloronaphthylphenol   10.20 L-Chloronaphthylphenol   10.20 L-Chloronaphthylphenol   10.20 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol   10.30 L-Chloronaphthylphenol	01 01 01 01 01 01 01 01 01 01						 	-					1		1
N-nitroso-di-n-propulamine 10.50  Iezachloroethane 10.30  Vitrobenzene 10.20  sophorone 10.40  I-Nitrophenol 10.20  I-Dimethylphenol 10.20  I-Dichloroethoxylmethane 10.30  I-Dichloroethoxylmethane 10.30  I-Dichloroethoxylmethane 10.70  I-Chloroaniline 10.01  I-Exachloroethoxylmethane 10.01  I-Exachloroethoxylmethane 10.01  I-Exachloroethoxylmethane 10.01  I-Exachloroethoxylmethane 10.01  I-Chloroaniline 10.01  I-Exachloroethoxylmenol 10.20  I-Methylnaphthalene 10.40  I-Ac-Trichlorophenol 10.20  I-Chloronaphthalene 10.80  I-Chloronaphthalene 10.80  I-Chloronaphthalene 10.30  I-Chloronaphthalene 10.30  I-Chloronaphthalene 10.30  I-Chloronaphthalene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30  I-Chloronaphthylene 10.30	01 01 01 01 01 01 01 01 01			! ! ! !			     						]		1
Mitrobenzene 10.30 Nitrobenzene 10.20 Sophorone 10.40 Nitrobenzene 10.20 Nitrobenol 10.10 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.20 Nitrobenol 10.30 Nitrobenol 10.30 Nitrobenol 10.30 Nitrobenol 10.30 Nitrobenol 10.30 Nitrobenol 10.30 Nitrobenol 10.30 Nitrobenol 10.30 Nitrobenol 10.30 Nitrobenol 10.30 Nitrobenol 10.30 Nitrobenol 10.30 Nitrobenol 10.30 Nitrobenol 10.30 Nitrobenol 10.30 Nitrobenol 10.30	0 { 0 ! 0 ! 0 ! 0 ! 0 ! 0 ! 0 ! 0 !			! ! ! !		1	   		! ! ! !						1
Nitrobenzene   0, 20 ssophorone   10, 40 ssophorone   10, 40 2-Nitrophenol   10, 10 2-Dimethylphenol   10, 20 pis-72-chloroethoxyl)methane   10, 30 2-Dichlorophenol   10, 20 3-2-4-Trichlorobenzene   10, 20 3-2-4-Trichlorobenzene   10, 20 3-Aughthaiene   10, 01 3-Chloroaniline   10, 01 3-Methylnaphthalene   10, 40 3-Methylnaphthalene   10, 40 3-Aughthaiene   10, 20 3-Aughthaiene   10, 20 3-Aughthaiene   10, 20 3-Aughthaiene   10, 20 3-Aughthaiene   10, 20 3-Aughthaiene   10, 20 3-Aughthaiene   10, 20 3-Aughthaiene   10, 20 3-Aughthaiene   10, 20 3-Aughthaiene   10, 20 3-Nitroaniline   10, 20 3-Nitroaniline   10, 20 3-Nitroaniline   10, 20 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10, 30 3-Aughthaiene   10,	01				1	!	 		! ! ! !	!		<u>                                     </u>	1		‡
10.40   10.10   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.20   10.2	01 01 01 01 01 01 01			! [	!	!	! !	<u> </u>	<u>                                     </u>			!!			<u> </u>
2-Nitrophenol   0.10 2-4-Dimethylphenol   10.20 2-4-Dichloroethoxyl)methane   10.30 2-4-Dichloroethoxyl)methane   10.30 2-4-Dichloroethoxyl)methane   10.20 2-4-Trichlorobenzene   10.20 2-4-Chloroaniline   10.01 2-4-Chloro-3-methylphenol   10.20 2-4-Chloro-3-methylphenol   10.20 2-4-5-Trichlorophenol   10.20 2-4-5-Trichlorophenol   10.20 2-4-5-Trichlorophenol   10.20 2-4-5-Trichlorophenol   10.20 2-4-5-Trichlorophenol   10.20 2-4-5-Trichlorophenol   10.20 3-Nitroaniline   10.01 3-Chloronaphthalene   11.30 3-Nitroaniline   10.20 3-Nitroaniline   10.30 3-Nitroaniline   10.30 3-Acenaphthene   10.30 3-4-Dinitrophenol   10.30 3-4-Dinitrophenol   10.30	)   )   )   )   )   )			<u> </u> 	<u>                                     </u>		<u> </u>		!!!						1
2.4-Dimethylphenol   0.20   2.4-Dichlorosthoxyl)methane   10.30   2.4-Dichlorosthoxyl)methane   10.20   2.4-Trichlorobenzene   10.20   3.5-Altrichlorobenzene   10.70   4-Chloroaniline   10.01   4-Chloro-3-methylphenol   10.20   4-Chloro-3-methylphenol   10.20   4-Chloro-3-methylphenol   10.20   4-A-Trichlorophenol   10.20   4-A-Trichlorophenol   10.20   4-A-Trichlorophenol   10.20   4-A-Trichlorophenol   10.20   4-A-Trichlorophenol   10.20   4-A-Trichlorophenol   10.20   4-Chloronaphthalene   10.30   4-Chloronaphtholene   11.30   4-Chloronaphtholene   10.20   5-Nitroaniline   10.01   4-Chloronaphtholene   10.30   5-Nitroaniline   10.30   4-Dinitrophenol   10.30   4-Dinitrophenol   10.30   5-A-Dinitrophenol   10.01   5-A-Dinitrophenol   10.01   5-A-Dinitrophenol   10.01   5-A-Dinitrophenol   10.01   5-A-Dinitrophenol   10.01   5-A-Dinitrophenol   10.01   5-A-Dinitrophenol   10.01	)			<u> </u>		<u> </u>	l <u></u>			<u> </u>		<u> </u>			1
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-Nitropheral 10.01	1			!	1	<u> </u>			<u> </u>						
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2.4-Dinitrotoluene 10.20	) [	1		l					1 1				- 1		!
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J/R = All positive results are estimated "I" and non-detected results are unusable "R"

• = These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

# CALIBRATION OUTLIER LOW CONCENTRATION WATER SEMIVOLATILE TCL COMPOUNDS (Page 2 of 2)

CASE\SAS#: 27986	LABORATORY: PDP ANAlistical
COLUMN:	SITE NAME: HIM CO LANGILL

Instrument# H-HP5973	Initial Cal.			Contin. Cal.				ntin. Ca		Contin. Cal.			Contin. Cal.			
Date/Time:		5/2/0	0-103	3	15/4/	20 792	26	15/5/	20-7	27				1		
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Diethylphthalate	0.01			1		1	I		<u> </u>			1			<u> </u>	Ī
4-Chlorophenyl-phenylether	0.401		L				L	<u> </u>	<u></u>			1	1	1	1	_
Fluorene	10.901		L			L	L	<u> </u>	<u></u>			1	1			1
4-Nitroaniline	[0.01]		L			1	L.,	<u> </u>				1	1	L	<u></u>	1
4.6-Dinitro-2-methylphenol	0.01					L	L					<u> </u>	!	<u>L</u>	1	
N-nitrosodiphenylamine	[0.01]				<u> </u>	L	1					<u> </u>	1	!	<u> </u>	
4-Bromophenvl-phenvlether	0.10			1		L	1					<u> </u>	L	L		
Hexachlorobenzene	[0.10]			L		L	L	L	L			1	Ī	<u> </u>	1 .	1
Pentachiorophenol	0.051					!	[					I	-			<u></u>
Phenanthrene	[0.70]			1	1	L						1			L	1
Anthracene	0.70				l	1	L .									Ī
Di-n-butvlphthalate	[0.01]			l	1	Į.	! !			_ !		1				Ī
Fluoranthene	0.60				!							Ĺ				$\Box$
Pyrene	[0.60]											L			Ī	1
Butylbenzylphthalate	10.01									1		L				
3.3'-Dichlorobenzidine	0.01				1	L						L			<u> </u>	
Benzo(a)anthracene	10.80!				<u> </u>					1						L
Chrysene	10.70!				L				!	1		L				1
bis(2-Ethylhexyl)phthalate	0.011				<u> </u>				!	1					1	Ī
Di-n-octvl phthalate	10.01!														<u> </u>	L
Benzo(b)fluoranthene	10.70!			Ĺ			! !					L			1	
Benzo(k)fluoranthene	10.70!						1 1					<u> </u>	1 1			
Benzo(a)pvrene	10.70!						! !			1		L				
Indeno(1,2,3-cd)pyrene	10.50!									لــــــــــــــــــــــــــــــــــــــ		Ĺ <u>.</u>				Ĺ
Dibenz(a,h)anthrancene	0.401							}	- 1							
Benzo(g,h,i)pervlene	10.50!															L
	1 1		}				1		}	1						
Nitrobenzene-d5	[0.01]						1									
2-Fluorobiphenyl	10.70												. !			
Terphenyl-d14	10.50									1					1	
Phenol-d5	10.80							1	1	1			1		1	i
2-Fluorophenol	10.60	· ·						1		1			1		1	_
2.4.6-Tribromophenol	10.01!						ī	1		1			1 1		1 1	

Reviewer's Init/Date: 5/25/07

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

ESAT-5-022-3 1/95

#### REGION V

# ESD Central Regional Laboratory Data Tracking Form for Contract Samples

Sample Delivery Group: EBPK9 CE	RCLIS No:							
Case No: 27986 Site	Name/Location: HIMED LANDFILL							
Contractor or EP.A Lab:	Data User: USEPA							
No. of Samples: 16 Date S	ampled or Date Received: 5-10-00							
Have Chain-of-Custody records been received? Yes Have traffic reports or packing lists been received? If no, are traffic report or packing list numbers written Yes No	on the Chain-of-Custody Record?							
If no, which traffic report or packing list numbers are	missing?							
Are basic data forms in? Yes / No No of samples claimed: 16 No								
Received by: Eug H. Sixon	,							
Received by LSSS: ENA H. Dixon								
Review started: MM 24-00 Re	viewer Signature: When Wilson							
Total time spent on review: 10,5 Do	tte review completed: MM 25-00							
Copied by: Eura M. Sexon ES	Date: 6-7-66							
Maried to user by: Eug H. Sulon	ESAT Date: 6-7-00							
DATA USER: Please fill in the blanks below and return this form to: Sylvia Griffin, Data Mgmt. Coordinator, Region V, ML-10C								
Data received by:	Date:							
Data review received by:	Date:							
Organic Data Complete [] Su Dioxin data Complete [] Su	itable for Intended Purpose [] \( \sif \text{ if OK} \) itable for Intended Purpose [] \( \sif \text{ if OK} \) itable for Intended Purpose [] \( \sif \text{ if OK} \) itable for Intended Purpose [] \( \sif \text{ if OK} \)							
PROBLEMS: Please indicate reasons why data are no	ot suitable for your uses.							
Received by Data Mgmt. Coordinator for Files. Date:								

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<b>SCPA</b>	Contract Laboratory Pro	oram a CII		o <b>dy Řeco</b> 'Analysis)				279		
	3. F	Region No. Sampling Co.	5.	Date Shippe	d Carrier-ED EX			7. Date Received	-Receiv	ed by:
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	Sam	ipler Signature	6.	Ship To:	5.34 <u>50</u>			8. Transfer to:		Date Received
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Distribution: Blue - Region Copy White - Lab Copy for Return to SMO Yellow - Lab Copy for Return to Region

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See Reverse for Additional Standard Instruction

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Remarks: Is custody seal intact? (N/none Cose: 27986 SDG: EDPK9

See Reverse for Additional Standard Instructions

Date / Time

4-19-00 9-02

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EPA Form 9110-2 (2/99)

See Reverse for Purpose Code Definitions

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Distriction: Blue - Region Copy White - Lab Copy for Return to SMO Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions
\*\*See Reverse for Purpose Code Definitions

# 2LCA LOW CONC. WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

				<del></del> .
	EPA	BFB	-	TOT
	SAMPLE NO.	%REC #		OUT
!	====================================	=====	=====	===
01	VBLK54	108	l	0;
02	VLCS54	106		l ol
03	EDPL7	109	<u> </u>	l o¦
04	EDPL8	106	l	l ol
05	EDPL9	108	 	0 }
06	EDPM0	112	 	l ol
07	EDPM4	110		l o¦
08	EDPM1	105	 	l ol
09	EDPM2	109	<u> </u>	l ol
10	EDPM5	105		o¦
11	VBLK55	114		l ol
12	VLCS55	118		0
13	EDPK9	114		l ol
14	EDPL1	87		l ol
15	EDPL3	90		l ol
16	EDPL4	94		0
17	EDPL5	87		0
18	EDPL6	91		0
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QC LIMITS %REC
BFB = Bromofluorobenzene (80-120)

# Column to be used to flag recovery values

Pages 1 o 1

<sup>\*</sup> Values outside of contract required QC limits

LOW CONC. WATER VOLATILE LAB CONTROL SAMPLE RECOVERY

VLCS54

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: FVLCS053

LCS Lot No.: 60

Lab File ID: F0879

Date Analyzed: 04/21/00

Purge Volume: 20.0 (mL)

Dilution Factor: 1.0

LCS Aliquot: 10.0 (uL)

COMPOUND	AMOUNT ADDED (ng)	AMOUNT RECOVERED (ng)	%REC #	QC LIMITS
	=====================================	=====================================	=====	=====   
Vinyl chloride	100	75	75	60-140
1,2-Dichloroethane	100	99	99	60-140
Carbon tetrachloride	100	91	91	60-140
1,2-Dichloropropane	100	<b> </b> 86	86	60-140
Trichloroethene	100	85	85	60-140
1,1,2-Trichloroethane	100	76	76	60-140
Benzene	100	92	92	60-140
cis-1,3-Dichloropropene	100	81	81	60-140
Bromoform	100	70	70	60-140
Tetrachloroethene	100	86	86	60-140
1,2-Dibromoethane	100	74	74	60-140
1,4-Dichlorobenzene	100	<del> </del> 77	77	60-140
l		[ 		l l

LCS Recovery: 0 outside limits out of 12 total.

COMMENTS:	

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

<sup>\*</sup> Values outside of QC limits.

LOW CONC. WATER VOLATILE LAB CONTROL SAMPLE RECOVERY

VLCS55

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDPK9

Lab Sample ID: FVLCS054

LCS Lot No.: 60

Lab File ID: F0893

Date Analyzed: 04/24/00

Purge Volume: 20.0 (mL)

Dilution Factor: 1.0

LCS Aliquot: 10.0 (uL)

COMPOUND	AMOUNT ADDED (ng)	AMOUNT RECOVERED (ng)	%REC #	QC LIMITS
Vinyl chloride	100	! 95	95	=====    60-140
1,2-Dichloroethane	100	117	117	60-140
Carbon tetrachloride	100	93	93	60-140
1,2-Dichloropropane	100	93	93	60-140
Trichloroethene	100	94	94	60-140
1,1,2-Trichloroethane	100	<b>!</b> 89	89	60-140
Benzene	100	98	98	60-140
cis-1,3-Dichloropropene	100	92	92	60-140
Bromoform	100	<del> </del> 97	97	60-140
Tetrachloroethene	100	92	92	60-140
1,2-Dibromoethane	100	86	86	60-140
1,4-Dichlorobenzene	100	89	89	60-140
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LCS Recovery: 0 outside limits out of 12 total.

COMMENTS:	

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<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

<sup>\*</sup> Values outside of QC limits.

LOW CONC. WATER VOLATILE METHOD BLANK SUMMARY

VBLK54

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: FVBLK053

Date Analyzed: 04/21/00

Lab File ID: F0878

Time Analyzed: 2303

Instrument ID: F-HP5973

#### THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

į	EPA	LAB	LAB	TIME
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
	=======================================			
	VLCS54	FVLCS053	F0879	2352
02		6004.010	F0880	0041
03		6004.011	F0881	0129
04		6004.012	F0882	0218
05		6004.013	F0883	0306
	EDPM4	6004.014	F0884	0354
	EDPM1	6008.001	F0885	0442
80		6008.002	F0887	0617
09	EDPM5	6008.003	F0888	0704
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COMMENTS:				

# LOW CONC. WATER VOLATILE METHOD BLANK SUMMARY

VB	LK	5.5	5	

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDPK9

Lab Sample ID: FVBLK054

Date Analyzed: 04/24/00

Lab File ID: F0892

Time Analyzed: 1037

Instrument ID: F-HP5973

# THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

!	EPA	LAB	LAB	TIME
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
	=======================================		=========	========
	VLCS55	FVLCS054	F0893	1126
02	EDPK9	6004.002	F0894	1215
03	EDPL1	6004.004	F0896	1406
04	EDPL3	6004.006	F0898	1534
05	EDPL4	6004.007	F0899	1623
06	EDPL5	6004.008	F0900	1712
07	EDPL6	6004.009	F0901	1800
08	EDPL0	6004.003	F0902	1849
09	EDPL2	6004.005	F0903	1939
10	VHBLK01	6004.001	F0904	2028
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COMMENTS:					

### lLCA

EPA SAMPLE NO.

1LCA LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

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i	VBLK54	i
i		i

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: FVBLK053

Date Received: \_\_\_\_

Lab File ID: F0878

Date Analyzed: 04/21/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
		1	1
	Chloromethane	1	U
174-83-9	Bromomethane	1:	U
75-01-4	Vinyl chloride	1	U
75-00-3	Chloroethane	_	U
1:75-09-2	Methylene chloride	2	ប
67-64-1	Acetone_	5	U
75-15-0	Carbon disulfide		U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	- i	U
156-59-2	cis-1,2-Dichloroethene	- i	U
156-60-5	trans-1,2-Dichloroethene_	1	U
67-66-3	Chloroform	_{	Ū
107-06-2	1,2-Dichloroethane	_ i	Ū
			Ū
74-97-5	2-Butanone Bromochloromethane	- i	Ū
71-55-6	1,1,1-Trichloroethane	- i - i - i	Ū
56-23-5	Carbon tetrachloride	- (	U
75-27-4	Bromodichloromethane	- i	Ū
			Ū
10061-01-5	1,2-Dichloropropane	-   -	Ū
79-01-6	Trichloroethene	-   -	Ū
124-48-1	Dibromochloromethane	- i	ับ
79-00-5	1,1,2-Trichloroethane	- i - i	U
71-43-2	Benzene		Ū
	trans-1,3-Dichloropropene		Ū
75-25-2	Bromoform		Ū
	4-Methyl-2-pentanone		Ū
591-78-6	2-Hexanone	- i 5	Ū
127-18-4	Tetrachloroethene		ប
	1,1,2,2-Tetrachloroethane		Ū
106-93-4	1,2-Dibromoethane	_ i	Ū
	Toluene	_ i	Ū
108-90-7	Chlorobenzene		U
100-41-4	Ethylbenzene	- i	Ū
100-42-5	Styrene	- i - 1	Ū
	Xylenes (total)		U
	1,3-Dichlorobenzene	<del>-</del> .	U
	1,4-Dichlorobenzene	<del>-</del> ;	U
	1,2-Dichlorobenzene	<b>-</b> :	Ū
	1,2-Dibromo-3-chloropropane	<b>→ !</b>	Ū
	1,2,4-Trichlorobenzene		Ū
		- <u>i</u>	į -

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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VBLK54	i
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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDPK9

Lab Sample ID: FVBLK053

Date Received:

Lab File ID: F0878

Date Analyzed: 04/21/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q =====
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK55

Lab Name: PDP ANALYTICAL SERVICES

Contract: 68-D7-0004

Lab Code: PDP

Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDPK9

Lab Sample ID: FVBLK054

Date Received:

Lab File ID: F0892

Date Analyzed: 04/24/00

CONCENTRATION

Purge Volume: 20

(mL)

Dilution Factor: 1.0

GC Column: DB-624

ID: 0.53 (mm) Length: 60

(m)

CAS NO. COMPOUND (ug/L) Q 74-87-3-----Chloromethane 1 1 U 74-83-9-----Bromomethane 1 | U 75-01-4------Vinyl chloride 1 U 75-00-3-----Chloroethane 1 U :75-09-2-----Methylene chloride 2 U 67-64-1------Acetone 5 | U 75-15-0-----Carbon disulfide 1 | U 75-35-4----1,1-Dichloroethene 1 | U 75-34-3-----1,1-Dichloroethane 1 U 156-59-2----cis-1,2-Dichloroethene 1 U 156-60-5----trans-1,2-Dichloroethene 1 U 67-66-3-----Chloroform 1 | U 107-06-2----1,2-Dichloroethane 1 | U 78-93-3----2-Butanone 5 | U 74-97-5-----Bromochloromethane 1 U 71-55-6-----1,1,1-Trichloroethane\_ 1 U 56-23-5-----Carbon tetrachloride 1 U 75-27-4-----Bromodichloromethane 1 U 78-87-5----1,2-Dichloropropane\_ 1 | U 10061-01-5----cis-1,3-Dichloropropene 1 U 79-01-6-----Trichloroethene 1 U 124-48-1-----Dibromochloromethane 1 U 79-00-5----1,1,2-Trichloroethane 1 | U 71-43-2-----Benzene 1 U 10061-02-6----trans-1,3-Dichloropropene 1 U 75-25-2-----Bromoform 1 U 5 U 108-10-1----4-Methyl-2-pentanone 591-78-6----2-Hexanone 5 U 127-18-4-----Tetrachloroethene 1 U 79-34-5----1,1,2,2-Tetrachloroethane 1 U 106-93-4----1,2-Dibromoethane 1 1 0 108-88-3-----Toluene 1 | U 108-90-7-----Chlorobenzene 1 U 100-41-4-----Ethylbenzene 1 U 100-42-5-----Styrene 1 | U 1330-20-7-----Xylenes (total) 1 0 541-73-1----1,3-Dichlorobenzene 1 | U 106-46-7----1,4-Dichlorobenzene 1 U 1 | U 95-50-1----1,2-Dichlorobenzene 96-12-8----1,2-Dibromo-3-chloropropane 1 | U 120-82-1-----1,2,4-Trichlorobenzene 1 U

OLC02.0

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

VBLK55	

Lab	Name:	PDP	ANALYTICAL	SERVICES	Contract:	68-D7-0004
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Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDPK9

Lab Sample ID: FVBLK054

Date Received: \_\_\_\_

Lab File ID: F0892

Date Analyzed: 04/24/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q =====
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

VHBLK01

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.001 Date Received: 04/19/00

Lab File ID: F0904 Date Analyzed: 04/24/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74.05.0			1
1 74-8/-3	Chloromethane	•	U
1 74-83-9	Bromomethane	<u>:</u>	U
/5-01-4	Vinyl chloride		U
/5-00-3	Chloroethane		U
1 /5-09-2	Methylene chloride	- <del>-</del>	U
67-64-1			U
1 75-15-0	Carbon disulfide		U
1 75-35-4	1,1-Dichloroethene	1	U
1 /5-34-3	1,1-Dichloroethane	1 1	Ŭ
1 156-59-2	cis-1,2-Dichloroethene		U
i 156-60-5	trans-1,2-Dichloroethene	- I	Ŭ
67-66-3	Chloroform	1	Ŭ
107-06-2	1,2-Dichloroethane		U
	2-Butanone		U
74-97-5	Bromochloromethane		U
171-55-6	1,1,1-Trichloroethane		U
56-23-5	Carbon tetrachloride		U
75-27-4	Bromodichloromethane		U
	1,2-Dichloropropane		U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	1	U
124-48-1	Dibromochloromethane	1	U
<b> </b> 79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	- I	Ū
10061-02-6	trans-1,3-Dichloropropene	- I'	U
75-25-2		- T	U
108-10-1	4-Methyl-2-pentanone	<u> </u>	Ū
591-78-6	2-Hexanone		U
	Tetrachloroethene	- I	Ŭ
79-34-5	1,1,2,2-Tetrachloroethane	- I	Ū
106-93-4	1,2-Dibromoethane	- I	U
108-88-3		1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
100-42-5	Styrene	1	U
1330-20-7	Xylenes (total)	1	U
	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane_	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

VHBLK01

Lab	Name:	PDP	ANALYTICAL	SERVICES
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S Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.001

Date Received: 04/19/00

Lab File ID: F0904

Date Analyzed: 04/24/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDPK9

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.002 Date Received: 04/19/00

Lab File ID: F0894 Date Analyzed: 04/24/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
	Chloromethane	1	l U
74-83-9	Bromomethane	-   1	U
75-01-4	Vinyl chloride	- 	U
75-00-3	Chloroethane	- 	U
1:75-09-2	Methylene chloride	6	•
1-67-64-1	Acetone	<b>-</b>   5	Ū
75-15-0	Carbon disulfide	1	¦U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	12	1
156-59-2	cis-1,2-Dichloroethene	0.8	J
156-60-5	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	- i 1	ľυ
	1,2-Dichloroethane	- i 1	ĺυ
1 78-93-3	2-Butanone	<b>5</b>	U
	Bromochloromethane	<b>-</b> :	U
	1,1,1-Trichloroethane	·	ľυ
56-23-5	Carbon tetrachloride	- i 1	ĺυ
75-27-4	Bromodichloromethane	<del>-</del> I	Ū
78-87-5	1,2-Dichloropropane	<del>-</del> I	Ū
	cis-1,3-Dichloropropene		Ū
79-01-6	Trichloroethene		Ū
124-48-1	Dibromochloromethane	<b>-</b> :	Ū
79-00-5	1,1,2-Trichloroethane	- :	Ū
71-43-2	Benzene	- ·	Ū
	trans-1,3-Dichloropropene		Ū
75-25-2	Bromoform		U
	4-Methyl-2-pentanone		ับ
591-78-6	2-Hexanone		Ū
	Tetrachloroethene	- <u>:</u>	Ū
79-34-5	1,1,2,2-Tetrachloroethane_		Ū
106-93-4	1,2-Dibromoethane		Ū
108-88-3	Toluene	<b>-</b> :	Ū
	Chlorobenzene	<b>-</b> '	ี่ ปั
	Ethylbenzene	:	์ ปั
100-42-5	Styrene		Ū
	Xylenes (total)	<del>-</del> .	Ū
	1,3-Dichlorobenzene		Ū
	1,4-Dichlorobenzene		Ū
	1,2-Dichlorobenzene	- :	บ
	1,2-Dibromo-3-chloropropane		ี่ บ
	1,2,4-Trichlorobenzene		U
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.002

Date Received: 04/19/00

Lab File ID: F0894

Date Analyzed: 04/24/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDPL0

CONCENTRATION

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.003 Date Received: 04/19/00

Lab File ID: F0902 Date Analyzed: 04/24/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	(ug/L)	Q
	Chloromethane	1	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene chloride	2	U
1.67-64-1		5	U
75-15-0	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene	1	U
	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
	1,2-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
	Bromochloromethane	1	U
	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	. :	บ
75-27-4	Bromodichloromethane	1	Ū
	1,2-Dichloropropane		Ū
	cis-1,3-Dichloropropene		Ū
	·Trichloroethene	· :	Ū
	Dibromochloromethane		Ū
	1,1,2-Trichloroethane	· <b>:</b>	U
71-43-2		:	Ū
	trans-1,3-Dichloropropene	• :	บ
	Bromoform		บ
	4-Methyl-2-pentanone		Ū
	·2-Hexanone		บ
	Tetrachloroethene		ប
	1,1,2,2-Tetrachloroethane	·	Ū
	1,2-Dibromoethane	· :	บ
108-88-3			Ū
	Chlorobenzene		U
	Ethylbenzene	· i	U U
100-41-4			U
	Xylenes (total)		U
	xylenes (total)	· i	ี่ ป
		- <del>-</del> -	U
	1,4-Dichlorobenzene		U
	1,2-Dichlorobenzene	· i	
	1,2-Dibromo-3-chloropropane_	· :	U
120-82-1	1,2,4-Trichlorobenzene	_i	U

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDPL0
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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.003

Date Received: 04/19/00

Lab File ID: F0902

413.5

Date Analyzed: 04/24/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q =====
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDPL1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.004 Date Received: 04/19/00

Lab File ID: F0896 Date Analyzed: 04/24/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
	Chloromethane	1	U
74-83-9	Bromomethane	_   _	U
75-01-4	Vinyl chloride	_ <b> </b>	U
75-00-3	Chloroethane	-   1	U
1:75-09-2	Methylene chloride	_ <b> </b> 2	U
67-64-1	Acetone		U
75-15-0	Carbon disulfide		U
75-35-4	1,1-Dichloroethene	_ <b> </b>	U
75-34-3	1,1-Dichloroethane	0.8	J
156-59-2	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
78-93-3	2-Butanone		U
74-97-5	Bromochloromethane		U
171-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	_  - 	U
1 70 07 5	1 0 Dishlana	1	U
10061-01-5	cis-1,3-Dichloropropene	_	U
79-01-6	Trichloroethene	1	U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	_ <b> </b>	U
10061-02-6	trans-1,3-Dichloropropene	1	U
	Bromoform		U
108-10-1	4-Methyl-2-pentanone	5	U
591-78-6	2-Hexanone		U
127-18-4	Tetrachloroethene	- <u> </u>	U
	1,1,2,2-Tetrachloroethane	_ i	U
	1,2-Dibromoethane		U
108-88-3		<del></del> :	U
108-90-7	Chlorobenzene		U
100-41-4	Ethylbenzene	1	Ū
100-42-5			U
	Xylenes (total)		Ū
	1,3-Dichlorobenzene		Ū
	1,4-Dichlorobenzene	<del>-</del> .	Ū
	1,2-Dichlorobenzene	<del></del> :	บ
- 'E'	1,2-Dibromo-3-chloropropane	<del> :</del>	Ū
	1,2,4-Trichlorobenzene		Ū
1		- <b>;</b>	_

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004 |\_

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.004

Date Received: 04/19/00

Lab File ID: F0896

Date Analyzed: 04/24/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAC NUMBER	GOVERNE WATE	1	EST. CONC.	
CAS NUMBER	COMPOUND NAME	RT	(ug/L)	Q
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22.		i ————————————————————————————————————	j	i
23.		i		i
24.		i ————		i
25.		i		
26.		j	·	i
27.		i		
28.		j		j
129		i		
120		<u> </u>		
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDPL2

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.005

Date Received: 04/19/00

Lab File ID: F0903

Date Analyzed: 04/24/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	1	
75-01-4	Vinyl chloride	1	
75-00-3	Chloroethane	1	
75-09-2	Methylene chloride	2	
67-64-1	Acetone	5	
75-15-0	Carbon disulfide	1	
75-35-4	1,1-Dichloroethene	1	U
	1,1-Dichloroethane	1	U
	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
	2-Butanone	5	U
	Bromochloromethane	11	U
71-55-6	1,1,1-Trichloroethane	1	
56-23-5	Carbon tetrachloride	1	
75-27-4	Bromodichloromethane	1	
	1,2-Dichloropropane	1	
	cis-1,3-Dichloropropene		
79-01-6	Trichloroethene	1	
124-48-1	Dibromochloromethane		
79-00-5	1,1,2-Trichloroethane	1	
71-43-2	Benzene	1	
	trans-1,3-Dichloropropene		
75-25-2	Bromoform	1	
	4-Methyl-2-pentanone	5	
591-78-6	2-Hexanone	5	
	Tetrachloroethene	1	
	1,1,2,2-Tetrachloroethane		_
106-93-4	1,2-Dibromoethane	1	
108-88-3			
	Chlorobenzene	1	
100-41-4	Ethylbenzene	1	
100-42-5	Styrene	1	
	Xylenes (total)	1	
	1,3-Dichlorobenzene		
	1,4-Dichlorobenzene	· i	
	1,2-Dichlorobenzene	1	_
	1,2-Dibromo-3-chloropropane	1	
	1,2,4-Trichlorobenzene		
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA	SAMPLE	NO

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPL2

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.005

Date Received: 04/19/00

Lab File ID: F0903

Date Analyzed: 04/24/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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18.				<b></b>
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDPL3

CONCENTRATION

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.006 Date Received: 04/19/00

Lab File ID: F0898 Date Analyzed: 04/24/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	110	J
74-83-9	Bromomethane	110	
75-01-4	Vinyl chloride	110	
75-00-3	Chloroethane	ili	
75-09-2	Methylene chloride	2 1	
67-64-1		5 1	
	Carbon disulfide	i	
	1,1-Dichloroethene	1 110	
75-34-3	1,1-Dichloroethane	1 1 1	
	cis-1,2-Dichloroethene	1 1	
	trans-1,2-Dichloroethene	110	
67-66-3	Chloroform	110	
	1,2-Dichloroethane	110	
78-93-3	2-Butanone	517	
	Bromochloromethane	110	
71-55-6	1,1,1-Trichloroethane		
56-23-5	Carbon tetrachloride	110	
75-27-4	Bromodichloromethane		
78 - 87 - 5	1,2-Dichloropropane	1 1	
10061-01-5	cis-1,3-Dichloropropene	117	
79-01-6	Trichloroethene	110	
	Dibromochloromethane		
79-00-5-	1,1,2-Trichloroethane	1 1 1	
71-43-2	Pongono	1 1 1	
		1 1 1	
75 25 2	trans-1,3-Dichloropropene	1 1 1	
		· ·	
	4-Methyl-2-pentanone	5 1	
591-78-6	2-Hexanone	5 1	
	Tetrachloroethene	117	
	1,1,2,2-Tetrachloroethane	110	
106-93-4	1,2-Dibromoethane	1 1	
108-88-3	Toluene	1 1	
108-90-7	Chlorobenzene	1 1	_
100-41-4	Ethylbenzene	1 1	-
100-42-5	Styrene	1 1	
1330-20-7	Xylenes (total)	117	
	1,3-Dichlorobenzene	110	
	1,4-Dichlorobenzene	1 1	
	1,2-Dichlorobenzene	1   1	
	1,2-Dibromo-3-chloropropane_	1 1	
120-82-1	1,2,4-Trichlorobenzene	1 1	J

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.006

Date Received: 04/19/00

Lab File ID: F0898

Date Analyzed: 04/24/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDPL4

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.007 Date Received: 04/19/00

Lab File ID: F0899 Date Analyzed: 04/24/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NO. COMPOUND (ug/L)	Q 	
74-87-3Chloromethane	1 U	
74-83-9Bromomethane	1 U	- 1
75-01-4Vinyl chloride	1¦U	
75-00-3Chloroethane	1 <b>¦</b> U	-
75-09-2Methylene chloride	2¦U	
67-64-1Acetone	5   U	ł
75-15-0Carbon disulfide	1 U	-
75-35-41,1-Dichloroethene	1 <b> </b> U	1
75-34-31,1-Dichloroethane	1 U	i
156-59-2cis-1,2-Dichloroethene	1 U	
156-60-5trans-1,2-Dichloroethene	1 U	Ì
67-66-3Chloroform	1¦U	1
107-06-21,2-Dichloroethane	1¦U	-
78-93-32-Butanone	5 <b> </b> U	}
74-97-5Bromochloromethane	1 U	-
71-55-61,1,1-Trichloroethane	1¦U	1
56-23-5Carbon tetrachloride	1 U	1
75-27-4Bromodichloromethane	1¦U	-
78-87-51,2-Dichloropropane	1¦U	!
10061-01-5cis-1,3-Dichloropropene	1   U	!
79-01-6Trichloroethene	ı¦U	- 1
124-48-1Dibromochloromethane	1¦U	!
79-00-51,1,2-Trichloroethane	1¦U	
71-43-2Benzene	1¦U	į
10061-02-6trans-1,3-Dichloropropene	1¦U	- {
75-25-2Bromoform [	1 <b>¦</b> U	ł
108-10-14-Methyl-2-pentanone	5   U	1
591-78-62-Hexanone	5   U	1
127-18-4Tetrachloroethene	1¦U	
79-34-51,1,2,2-Tetrachloroethane	ı¦U	ł
106-93-41,2-Dibromoethane	1 <b> </b> U	i
108-88-3Toluene	ı¦U	
108-90-7Chlorobenzene	1¦U	-
100-41-4Ethylbenzene	1 U	1
100-42-5Styrene	1¦U	
1330-20-7Xylenes (total)	1 <b>¦</b> U	ł
541-73-11,3-Dichlorobenzene	1¦U	1
106-46-71,4-Dichlorobenzene	1¦U	1
95-50-11,2-Dichlorobenzene	1{U	Į.
96-12-81,2-Dibromo-3-chloropropane	1 U	İ
120-82-11,2,4-Trichlorobenzene	1 U	i
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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EDPL4	ţ
ED574	- 1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.007

Date Received: 04/19/00

Lab File ID: F0899

Date Analyzed: 04/24/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDPL5

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.008 Date Received: 04/19/00

Lab File ID: F0900 Date Analyzed: 04/24/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

	CONCENTRATI		NC	
CAS NO.	COMPOUND	(ug/L)	Q	
74-87-3	Chloromethane	1	U	
74-83-9	Bromomethane	1	U	
	Vinyl chloride	•	บี	
75-00-3	Chloroethane		U	
	Methylene chloride		Ū	
67-64-1		- I	บ	
	Carbon disulfide		U	
75-35-4	1,1-Dichloroethene	1	ับ	
	1,1-Dichloroethane	-	ับ	
156-59-2	cis-1,2-Dichloroethene	I	U	
156-60-5	trans-1,2-Dichloroethene		U	
67-66-3	Chloroform		U	
	1,2-Dichloroethane	•	U	
78-93-3	2-Butanone	1	บ	
	Bromochloromethane		U	
	1,1,1-Trichloroethane	- I	Ū	
71-33-0	Carbon tetrachloride	•	•	
75 77 4	carbon tetrachioride	1	U	
75-27-4	Bromodichloromethane	- <del>-</del>	Ŭ	
/8-8/-5	1,2-Dichloropropane	-	ַן	
10061-01-5	cis-1,3-Dichloropropene	- I	U	
	Trichloroethene	- I	.¦U	
	Dibromochloromethane	_ I	Ųυ	
	1,1,2-Trichloroethane	- T	U	
71-43-2		*	. U	
10061-02-6	trans-1,3-Dichloropropene	1	U	
	Bromoform	- I	U	
	4-Methyl-2-pentanone	5	U	
	2-Hexanone	5	U	
127-18-4	Tetrachloroethene	1	U	
79-34-5	1,1,2,2-Tetrachloroethane	1	ľυ	
106-93-4	1,2-Dibromoethane	1	U	
108-88-3	Toluene	1	U	
108-90-7	Chlorobenzene	1	U	
100-41-4	Ethylbenzene	1	U	
100-42-5		1	Ū	
	Xylenes (total)		Ū	
	1,3-Dichlorobenzene		Ū	
	1,4-Dichlorobenzene	i	Ū	
	1, 2-Dichlorobenzene	i e	Ū	
	1,2-Dibromo-3-chloropropane_	1	Ū	
	1,2,4-Trichlorobenzene		U	
120 02-1-3-4	T, Z, T III CIII OL ODCIIZEIIC	† * * * * * * * * * * * * * * * * * * *	ľ	

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDPL5

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.008

Date Received: 04/19/00

Lab File ID: F0900

Date Analyzed: 04/24/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDPL6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.009 Date Received: 04/19/00

Lab File ID: F0901 Date Analyzed: 04/24/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

	•	CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
		T	
74-87-3	Chloromethane		U
	Bromomethane		ן ט
	Vinyl chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene chloride	1 2	U
67-64-1		5	U
75-15-0	Carbon disulfide	1	U
	1,1-Dichloroethene	1	U !
75-34-3	1,1-Dichloroethane	0.8	J
156-59-2	cis-1,2-Dichloroethene	0.7	J
156-60-5	trans-1,2-Dichloroethene	1	ן טן
67-66-3	Chloroform	1	ן טן
107-06-2	1,2-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	1	U
	1,1,1-Trichloroethane	1	lu i
	Carbon tetrachloride		U
	Bromodichloromethane	-	lu i
	1,2-Dichloropropane	· · · · · · · · · · · · · · · · · · ·	iŭ i
	cis-1,3-Dichloropropene	1	Ü
	Trichloroethene		Ū
	Dibromochloromethane		บ
	1,1,2-Trichloroethane	:	Ū
71-43-2			lu l
	trans-1,3-Dichloropropene	i .	U
75-25-2		i	ប់
	4-Methyl-2-pentanone	i e	ĺυ
	2-Hexanone	5	ן ט
127-18-4	Tetrachloroethene	1	ן טן
	1,1,2,2-Tetrachloroethane	1	ן ט
	1,2-Dibromoethane	1	lu l
108-88-3		1	U I
	Chlorobenzene	1	ן ט
	Ethylbenzene		U
100-42-5	<del></del>	<u> </u>	Ū
	Xylenes (total)		U
	1,3-Dichlorobenzene		U
_	1,4-Dichlorobenzene		U
	1,2-Dichlorobenzene	·	lu l
	1,2-Dibromo-3-chloropropane	1	U i
	1,2,4-Trichlorobenzene	1	U
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDPL6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.009

Date Received: 04/19/00

Lab File ID: F0901

Date Analyzed: 04/24/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1. 000075-43-4 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26.	1	RT	(ug/L) ========	! ~
27.   28.   29.   30.				

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDPL7

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.010 Date Received: 04/19/00

Lab File ID: F0880 Date Analyzed: 04/22/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl chloride	1	ľυ
75-00-3	Chloroethane	1	U
.75-09-2	Methylene chloride	2	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
			U
107-06-2	Chloroform_ 1,2-Dichloroethane	1	U
78-93-3	2-Butanone	5	U .
74-97-5	2-Butanone Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
10001-01-2	cls-1,3-Dichioropropene	1	U
79-01-6	Trichloroethene	1	U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene		U
10061-02-6	trans-1,3-Dichloropropene	1	U
75-25-2	Bromoform	1	U
108-10-1	4-Methyl-2-pentanone	` <b> </b> 5	U
591-78-6	2-Hexanone		U
127-18-4	Tetrachloroethene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-88-3	Toluene	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
100-42-5	Styrene	1	U
	Xylenes (total)		U
	1,3-Dichlorobenzene		U
	1,4-Dichlorobenzene	- I.	U
	1,2-Dichlorobenzene	• ;	Ū
	1,2-Dibromo-3-chloropropane	• ]	Ū
	1,2,4-Trichlorobenzene	- 1	Ū

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

	i
DD D T O	i
EDPL7	i
	i

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.010

Date Received: 04/19/00

Lab File ID: F0880

Date Analyzed: 04/22/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

1.	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
3.	-				
4. 5. 6. 6. 7. 8. 9. 10. 11. 11. 12. 13. 14. 15. 16. 17. 18. 19. 19. 19. 19. 19. 19. 19. 19. 19. 19	· · _ · _ · _ · _ · _ · _ ·		<u> </u>		i
7.	4.				<u> </u>
7.	5.				
9.	7. —		ļi		İ
10.			i		
11.	10				ļ
13.       ————————————————————————————————————	- · · · - · · · · · · · · · · · · · · ·				
14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28.					
15.			<u> </u>		ļ
17.         18.         19.         20.         21.         22.         23.         24.         25.         26.         27.         28.         29.					i
18.					
19.	1		İ		<u> </u>
21.       22.       23.       24.       25.       26.       27.       28.       29.	19		i		
22.       23.       24.       25.       26.       27.       28.       29.	ii		[		<u> </u>
23. 24. 25. 26. 27. 28. 29.					l
25	23		<del></del>		
26			i		
28.	26		<del></del>		
29.	100		ļ ————		<u> </u>
	i –				
	30.				

.LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDPL8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.011

Date Received: 04/19/00

Lab File ID: F0881

Date Analyzed: 04/22/00

CONCENTRATION

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60

74-83-9	Q
75-01-4	. U
75-01-4	.   บ
75-00-3	. ไบ
75-09-2	.   บ
67-64-1	U
75-35-41,1-Dichloroethene       1         75-34-31,1-Dichloroethane       3         156-59-2cis-1,2-Dichloroethene       1         156-60-5cis-1,2-Dichloroethene       1         67-66-3	ijυ
75-35-41,1-Dichloroethene       1         75-34-31,1-Dichloroethane       3         156-59-2cis-1,2-Dichloroethene       1         156-60-5cis-1,2-Dichloroethene       1         67-66-3	.   บ
156-59-2	. U
156-59-2	, [
156-60-5	:1
67-66-3	Ū
107-06-21,2-Dichloroethane       1         78-93-32-Butanone       5         74-97-5Bromochloromethane       1         71-55-61,1,1-Trichloroethane       1         56-23-5Carbon tetrachloride       1         75-27-4Bromodichloromethane       1         78-87-51,2-Dichloropropane       8         10061-01-51,3-Dichloropropene       1         79-01-6Trichloroethene       1         124-48-1Dibromochloromethane       1         79-00-51,1,2-Trichloroethane       1         71-43-2Benzene       1         10061-02-6trans-1,3-Dichloropropene       1         75-25-2Bromoform       1         108-10-14-Methyl-2-pentanone       5         591-78-62-Hexanone       5         127-18-4Tetrachloroethene       1         106-93-41,2-Dibromoethane       1         108-88-3Toluene       1         109-93-4	U
78-93-3	.   U
74-97-5	υ
71-55-61,1,1-Trichloroethane       1         56-23-5Carbon tetrachloride       1         75-27-4Bromodichloromethane       1         78-87-51,2-Dichloropropane       8         10061-01-5cis-1,3-Dichloropropene       1         79-01-6Trichloroethene       1         124-48-1Dibromochloromethane       1         79-00-51,1,2-Trichloroethane       1         71-43-2Benzene       1         10061-02-6trans-1,3-Dichloropropene       1         75-25-2Bromoform       1         108-10-14-Methyl-2-pentanone       5         51-78-62-Hexanone       5         127-18-4Tetrachloroethene       1         79-34-51,1,2,2-Tetrachloroethane       1         106-93-41,2-Dibromoethane       1         108-88-3Toluene       1         100-41-4Ethylbenzene       1         100-42-5Styrene       1         1330-20-7	. J U
56-23-5	. โบ
75-27-4	. l u
78-87-5	Ū
10061-01-5cis-1,3-Dichloropropene       1         79-01-6Trichloroethene       1         124-48-1Dibromochloromethane       1         79-00-51,1,2-Trichloroethane       1         71-43-2Benzene       1         10061-02-6trans-1,3-Dichloropropene       1         75-25-2Bromoform       1         108-10-14-Methyl-2-pentanone       5         591-78-62-Hexanone       5         127-18-4Tetrachloroethene       1         79-34-51,1,2,2-Tetrachloroethane       1         106-93-41,2-Dibromoethane       1         108-88-3Toluene       1         100-41-4Ethylbenzene       1         100-42-5Xylenes (total)       1         541-73-11,3-Dichlorobenzene       1         106-46-71,2-Dichlorobenzene       1         95-50-11,2-Dibromo-3-chloropropane       1	3
79-01-6Trichloroethene       1         124-48-1Dibromochloromethane       1         79-00-51,1,2-Trichloroethane       1         71-43-2Benzene       1         10061-02-6trans-1,3-Dichloropropene       1         75-25-2Bromoform       1         108-10-14-Methyl-2-pentanone       5         591-78-62-Hexanone       5         127-18-4Tetrachloroethene       1         79-34-51,1,2,2-Tetrachloroethane       1         106-93-41,2-Dibromoethane       1         108-88-3Toluene       1         100-41-4Ethylbenzene       1         100-42-5Styrene       1         1330-20-7Xylenes (total)       1         541-73-11,3-Dichlorobenzene       1         106-46-71,4-Dichlorobenzene       1         95-50-11,2-Dichlorobenzene       1         96-12-81,2-Dibromo-3-chloropropane       1	Ū
124-48-1	Ū
79-00-51,1,2-Trichloroethane       1         71-43-2Benzene       1         10061-02-6trans-1,3-Dichloropropene       1         75-25-2Bromoform       1         108-10-14-Methyl-2-pentanone       5         591-78-62-Hexanone       5         127-18-4Tetrachloroethene       1         79-34-51,2,2-Tetrachloroethane       1         106-93-41,2-Dibromoethane       1         108-88-3Toluene       1         108-90-7Chlorobenzene       1         100-41-4Ethylbenzene       1         100-42-5	Ū
71-43-2	Ū
10061-02-6trans-1,3-Dichloropropene	Ū
75-25-2Bromoform  108-10-14-Methyl-2-pentanone  591-78-62-Hexanone  127-18-4Tetrachloroethene  79-34-51,1,2,2-Tetrachloroethane  106-93-41,2-Dibromoethane  108-88-3Chlorobenzene  100-41-4Ethylbenzene  100-42-5Styrene  1330-20-7Xylenes (total)  541-73-11,3-Dichlorobenzene  106-46-71,4-Dichlorobenzene  95-50-11,2-Dichlorobenzene  196-12-81,2-Dibromo-3-chloropropane	Ū
108-10-14-Methyl-2-pentanone       5         591-78-62-Hexanone       5         127-18-4Tetrachloroethene       1         79-34-51,1,2,2-Tetrachloroethane       1         106-93-41,2-Dibromoethane       1         108-88-3Toluene       1         108-90-7Chlorobenzene       1         100-41-4Ethylbenzene       1         100-42-5Styrene       1         1330-20-7Xylenes (total)       1         541-73-11,3-Dichlorobenzene       1         106-46-71,4-Dichlorobenzene       1         95-50-11,2-Dichlorobenzene       1         96-12-81,2-Dibromo-3-chloropropane       1	. ไบ
591-78-62-Hexanone       5         127-18-4Tetrachloroethene       1         79-34-51,1,2,2-Tetrachloroethane       1         106-93-41,2-Dibromoethane       1         108-88-3Toluene       1         108-90-7Chlorobenzene       1         100-41-4Ethylbenzene       1         100-42-5Styrene       1         1330-20-7Xylenes (total)       1         541-73-11,3-Dichlorobenzene       1         106-46-71,4-Dichlorobenzene       1         95-50-11,2-Dichlorobenzene       1         96-12-81,2-Dibromo-3-chloropropane       1	บี
127-18-4Tetrachloroethene       1         79-34-51,1,2,2-Tetrachloroethane       1         106-93-41,2-Dibromoethane       1         108-88-3Toluene       1         108-90-7Chlorobenzene       1         100-41-4Ethylbenzene       1         100-42-5Styrene       1         1330-20-7Xylenes (total)       1         541-73-11,3-Dichlorobenzene       1         106-46-71,4-Dichlorobenzene       1         95-50-11,2-Dichlorobenzene       1         96-12-81,2-Dibromo-3-chloropropane       1	บี
79-34-51,1,2,2-Tetrachloroethane       1         106-93-41,2-Dibromoethane       1         108-88-3Toluene       1         108-90-7Chlorobenzene       1         100-41-4Ethylbenzene       1         100-42-5Styrene       1         1330-20-7Xylenes (total)       1         541-73-11,3-Dichlorobenzene       1         106-46-71,4-Dichlorobenzene       1         95-50-11,2-Dichlorobenzene       1         96-12-81,2-Dibromo-3-chloropropane       1	Ū
106-93-41, 2-Dibromoethane       1         108-88-3Toluene       1         108-90-7Chlorobenzene       1         100-41-4Ethylbenzene       1         100-42-5Styrene       1         1330-20-7Xylenes (total)       1         541-73-11, 3-Dichlorobenzene       1         106-46-71, 4-Dichlorobenzene       1         95-50-11, 2-Dichlorobenzene       1         96-12-81, 2-Dibromo-3-chloropropane       1	υ
108-88-3Toluene       1         108-90-7Chlorobenzene       1         100-41-4Ethylbenzene       1         100-42-5Styrene       1         1330-20-7Xylenes (total)       1         541-73-11,3-Dichlorobenzene       1         106-46-71,4-Dichlorobenzene       1         95-50-11,2-Dichlorobenzene       1         96-12-81,2-Dibromo-3-chloropropane       1	. โบ
108-90-7	Ū
100-41-4Ethylbenzene       1         100-42-5Styrene       1         1330-20-7	. บ
100-42-5Styrene       1         1330-20-7	. ไป
1330-20-7	Ū
541-73-11,3-Dichlorobenzene       1         106-46-71,4-Dichlorobenzene       1         95-50-11,2-Dichlorobenzene       1         96-12-81,2-Dibromo-3-chloropropane       1	Ū
106-46-71,4-Dichlorobenzene       1         95-50-11,2-Dichlorobenzene       1         96-12-81,2-Dibromo-3-chloropropane       1	.   บ
95-50-1	.   บ
96-12-81,2-Dibromo-3-chloropropane_   1	Ū
	Ū
120-82-11,2,4-Trichlorobenzene 1	Ū

OLC02.0

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDPL8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.011

Date Received: 04/19/00

Lab File ID: F0881

Date Analyzed: 04/22/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
=======================================	!	!	==========	. ~
18				

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPL9

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.012

Date Received: 04/19/00

Lab File ID: F0882

Date Analyzed: 04/22/00

CONCENTRATION

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	] 1	U I
74-83-9	Bromomethane	• :	U
75-01-4	Vinyl chloride	• ;	บ
75-00-3	Chloroethane	· :	ָּט ט
! 75-00-3 ! 75-00-2	Methylene chloride		U
67-64-1	Methylene Chioride		U
	Carbon disulfide		י טו   ט
1 75 25 4	1,1-Dichloroethene	• !	• -
/5-35-4	I,I-Dichloroethene	= ;	U
i /5-34-3	1,1-Dichloroethane	<b>-</b> :	U
156-59-2	cis-1,2-Dichloroethene	_ •	U (
156-60-5	trans-1,2-Dichloroethene	-	ן ט
	Chloroform	<b>-</b> :	U
107-06-2	1,2-Dichloroethane		U
	2-Butanone	_	U
74-97-5	Bromochloromethane	_	U
71-55-6	1,1,1-Trichloroethane	1	U
	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	1	U I
	1,2-Dichloropropane	1	U
	cis-1,3-Dichloropropene	= I	U
79-01-6	Trichloroethene		ע ו
	Dibromochloromethane	= :	Ū
· E	1,1,2-Trichloroethane	- ;	ไบ้
71-43-2		- :	บ
	trans-1,3-Dichloropropene		U
	Bromoform	- :	บ
	4-Methyl-2-pentanone		ับ
	2-Hexanone	= ;	T I
		• •	
	Tetrachloroethene		U
	1,1,2,2-Tetrachloroethane	- :	U
	1,2-Dibromoethane	- :	U i
108-88-3		- :	ן ט
	Chlorobenzene	<del>-</del> !	U
100-41-4	Ethylbenzene	<b>-</b> :	U
100-42-5		_	ן ט
	Xylenes (total)	_	ן ט
541-73-1	1,3-Dichlorobenzene	_	U
106-46-7	1,4-Dichlorobenzene	]	U
	1,2-Dichlorobenzene	1	ן ט
	1,2-Dibromo-3-chloropropane	- {	U
	1,2,4-Trichlorobenzene		ט ו
		-	1

EDPM0

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.013 Date Received: 04/19/00

Lab File ID: F0883 Date Analyzed: 04/22/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	ָ ע
74-83-9	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
75-00-3	Chloroethane	1	ט
	Methylene chloride	2	U
67-64-1	Acetone	1 5	U
	Carbon disulfide	1	U !
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	4	1
156-59-2	cis-1,2-Dichloroethene	2	
156-60-5	trans-1,2-Dichloroethene	1	l Ū
67-66-3	Chloroform	1	U !
107-06-2	1,2-Dichloroethane	1	U
	2-Butanone	5	U
74-97-5	Bromochloromethane	1	U
	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	- I	U
78-87-5	1,2-Dichloropropane	9	İ
10061-01-5	cis-1,3-Dichloropropene		Ū
79-01-6	Trichloroethene		U
124-48-1	Dibromochloromethane	- I.	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	1	ן ט
	trans-1,3-Dichloropropene	1	ט
	Bromoform	1	U
	4-Methyl-2-pentanone	1 5	<b>ט</b>
591-78-6	2-Hexanone	5	ן ט
	Tetrachloroethene	1	U
	1,1,2,2-Tetrachloroethane	1	ן ט
	1,2-Dibromoethane	1	ן נו
108-88-3	Toluene	1	U
	Chlorobenzene	1	U
	Ethylbenzene	1	U
100-42-5		1	ן טן
	Xylenes (total)		ן ט
	1,3-Dichlorobenzene		ן ט
	1,4-Dichlorobenzene	1	U
	1,2-Dichlorobenzene	1	U
	1,2-Dibromo-3-chloropropane	1	lu l
	1,2,4-Trichlorobenzene	3	U

# 1LCE

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

	- 1
	- 1
EDPMO	
EDPMO	- 1
	- 1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.013

Date Received: 04/19/00

Lab File ID: F0883

Date Analyzed: 04/22/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

Number TICs found: 2

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000075-43-4 2.000060-29-7 3. 4. 5. 6. 7. 8. 9. 10. 11.	Methane, dichlorofluoro- Ethyl ether	5.91	4	JN JN
14.				
17.  18.  19.  20.				
22. 23. 24. 25.				
26.				

#### 1LCA

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDPM1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6008.001 Date Received: 04/20/00

Lab File ID: F0885 Date Analyzed: 04/22/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	1	ן ט
75-01-4	Vinyl chloride	1	ן ט
75-00-3	Chloroethane	1	U
.75-09-2	Methylene chloride	2	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1 3	11
156-59-2	cis-1,2-Dichloroethene	1	· —— ·
156-60-5	trans-1,2-Dichloroethene	1	U
67-66-3		1	U
107-06-2	1,2-Dichloroethane	1	U
78-93-3	2-Butanone	1 5	ן טן
74-97-5	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	ן טן
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	1	ן ט
78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	1	U
124-48-1	Dibromochloromethane	1	[U ]
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
75-25-2	Bromoform		U
108-10-1	4-Methyl-2-pentanone	5	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	ן טן
106-93-4	1,2-Dibromoethane	1	U
108-88-3	Toluene	1	U I
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	ן ט
100-42-5	Styrene	1	ן טן
1330-20-7	Xylenes (total)	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
	1,2-Dichlorobenzene	1	U
	1,2-Dibromo-3-chloropropane	1	U
	1,2,4-Trichlorobenzene	1	U
l		l	

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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EDPM1	į
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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6008.001

Date Received: 04/20/00

Lab File ID: F0885

Date Analyzed: 04/22/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000075-43-4 2.000060-29-7 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24.	I	RT ======= 5.91 6.82	(ug/L) ====================================	! -
25. 26. 27. 28. 29. 30.				

# 1LCA

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDPM2

CONCENTRATION

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDPK9

Lab Sample ID: 6008.002 Date Received: 04/20/00

Lab File ID: F0887 Date Analyzed: 04/22/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	1 1	U
	Bromomethane	;	เบ เบ
	Vinyl chloride	:	U
	Chloroethane		บ
	Methylene chloride		U
67-64-1		:	U
	Carbon disulfide	:	บ
	1,1-Dichloroethene	I	Ŭ
	1,1-Dichloroethane	2	, ;
	cis-1,2-Dichloroethene	1	::
	trans-1,2-Dichloroethene	•	Ū
	Chloroform	•	lu l
	1,2-Dichloroethane	:	บ
	2-Butanone	-	บ
	Bromochloromethane	•	บ
	1,1,1-Trichloroethane	•	Ū
	Carbon tetrachloride	i e	U
75-27-4	Bromodichloromethane	:	เบ้ เบ้
	1,2-Dichloropropane	:	Ū
	cis-1,3-Dichloropropene	i	บ
	Trichloroethene		บ
	Dibromochloromethane	-	Ū
	1,1,2-Trichloroethane	i e	Ū
71-43-2		•	Ū
	trans-1,3-Dichloropropene	·	Ū
	Bromoform	i	Ū
	4-Methyl-2-pentanone		ไบ
	2-Hexanone	- T	U
	Tetrachloroethene	i	İυ
	1,1,2,2-Tetrachloroethane	1	U
	1,2-Dibromoethane	1	U
108-88-3	· · · · · · · · · · · · · · · · · · ·	1	U
	Chlorobenzene	1	U
	Ethylbenzene	1	U
100-42-5		i	U
	Xylenes (total)	1	U
	1,3-Dichlorobenzene	1	U
	1,4-Dichlorobenzene	1	U
	1,2-Dichlorobenzene	1	U
	1,2-Dibromo-3-chloropropane	1	U
	1,2,4-Trichlorobenzene	•	U
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# 1LCE

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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EDPM2	- {

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6008.002

Date Received: 04/20/00

Lab File ID: F0887

Date Analyzed: 04/22/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
CAS NUMBER  ===================================	!	RT ======= 5.91 5.92 6.82	(ug/L) ====================================	! ~ !
24 .				

EDPM4

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.014 Date Received: 04/19/00

Lab File ID: F0884 Date Analyzed: 04/22/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene chloride	0.5	J
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide		U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
	trans-1,2-Dichloroethene_	1	U
	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	υ
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	ប
79-01-6	Trichloroethene	\ i	U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
75-25-2	Bromoform	1	U
108-10-1	4-Methyl-2-pentanone	5	U ·
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
	1,1,2,2-Tetrachloroethane	1	Ū
106-93-4	1,2-Dibromoethane	1	U
108-88-3		1	U
	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	ប
100-42-5		_ E	U
	Xylenes (total)		U
	1,3-Dichlorobenzene	- <del>-</del>	U
	1,4-Dichlorobenzene		Ū
	1,2-Dichlorobenzene		U
	1,2-Dibromo-3-chloropropane		Ū
	1,2,4-Trichlorobenzene		บ
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TENTATIVELY IDENTIFIED COMPOUNDS

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EDPM4	į
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b Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDPK9

Lab Sample ID: 6004.014

Date Received: 04/19/00

Lab File ID: F0884

Date Analyzed: 04/22/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EDPM5

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6008.003 Date Received: 04/20/00

Lab File ID: F0888 Date Analyzed: 04/22/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

74-87-3	CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
75-01-4	74-87-3	Chloromethane	1	U
1	74-83-9	Bromomethane	1	U
1	75-01-4	Vinyl chloride	1	U
5	75-00-3	Chloroethane	1	U
5	75-09-2	Methylene chloride	0.9	J
1	67-64-1	Acetone	5	U !
1	75-15-0	Carbon disulfide	1	U
1	75-35-4	1,1-Dichloroethene	1	ָּט
1	75-34-3	1,1-Dichloroethane	1	U ¦
1 U   107-06-2	156-59-2	cis-1,2-Dichloroethene	1	U
1 U   107-06-2	156-60-5	trans-1,2-Dichloroethene	1	U
78-93-32-Butanone       5 U         74-97-5Bromochloromethane       1 U         71-55-61,1,1-Trichloroethane       1 U         56-23-5Carbon tetrachloride       1 U         75-27-4Bromodichloromethane       1 U         78-87-51,2-Dichloropropane       1 U         10061-01-5cis-1,3-Dichloropropene       1 U         79-01-6Trichloroethene       1 U         124-48-1Dibromochloromethane       1 U         79-00-51,1,2-Trichloroethane       1 U         71-43-2Benzene       1 U         10061-02-6trans-1,3-Dichloropropene       1 U         75-25-2Bromoform       1 U         108-10-14-Methyl-2-pentanone       5 U         591-78-62-Hexanone       5 U         127-18-4Tetrachloroethene       1 U         106-93-41,1,2,2-Tetrachloroethane       1 U         108-88-3Toluene       1 U         108-88-3Toluene       1 U         100-42-5Styrene       1 U         130-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U <td>67-66-3</td> <td>Chloroform</td> <td>1</td> <td><b>U</b></td>	67-66-3	Chloroform	1	<b>U</b>
74-97-5	107-06-2	1,2-Dichloroethane	1	U
71-55-6			5	U
56-23-5	74-97-5	Bromochloromethane	1	U
56-23-5	71-55-6	1,1,1-Trichloroethane	1	U
75-27-4	56-23-5	Carbon tetrachloride	1	U
10061-01-5cis-1,3-Dichloropropene       1 U         79-01-6Trichloroethene       1 U         124-48-1Dibromochloromethane       1 U         79-00-51,1,2-Trichloroethane       1 U         71-43-2Benzene       1 U         10061-02-6trans-1,3-Dichloropropene       1 U         75-25-2Bromoform       1 U         108-10-14-Methyl-2-pentanone       5 U         591-78-62-Hexanone       5 U         127-18-4Tetrachloroethene       1 U         79-34-51,1,2,2-Tetrachloroethane       1 U         106-93-41,2-Dibromoethane       1 U         108-88-3	75-27-4	Bromodichloromethane	1	U
79-01-6Trichloroethene       1 U         124-48-1Dibromochloromethane       1 U         79-00-51,1,2-Trichloroethane       1 U         71-43-2Benzene       1 U         10061-02-6trans-1,3-Dichloropropene       1 U         75-25-2Bromoform       1 U         108-10-14-Methyl-2-pentanone       5 U         591-78-62-Hexanone       5 U         127-18-4Tetrachloroethene       1 U         79-34-51,1,2,2-Tetrachloroethane       1 U         106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dibromo-3-chloropropane       1 U				U
124-48-1	10061-01-5	cis-1,3-Dichloropropene	1	U
79-00-51,1,2-Trichloroethane       1 U         71-43-2Benzene       1 U         10061-02-6trans-1,3-Dichloropropene       1 U         75-25-2Bromoform       1 U         108-10-14-Methyl-2-pentanone       5 U         591-78-62-Hexanone       1 U         127-18-4Tetrachloroethene       1 U         79-34-51,1,2,2-Tetrachloroethane       1 U         106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,2-Dichlorobenzene       1 U         95-50-11,2-Dibromo-3-chloropropane       1 U	79-01-6	Trichloroethene		U
79-00-51,1,2-Trichloroethane       1 U         71-43-2Benzene       1 U         10061-02-6trans-1,3-Dichloropropene       1 U         75-25-2Bromoform       1 U         108-10-14-Methyl-2-pentanone       5 U         591-78-62-Hexanone       1 U         127-18-4Tetrachloroethene       1 U         79-34-51,1,2,2-Tetrachloroethane       1 U         106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,2-Dichlorobenzene       1 U         95-50-11,2-Dibromo-3-chloropropane       1 U	124-48-1	Dibromochloromethane	1	U
71-43-2	79-00-5	1,1,2-Trichloroethane	1	ן ט
75-25-2	71-43-2	Benzene	1	U
108-10-14-Methyl-2-pentanone       5 U         591-78-62-Hexanone       5 U         127-18-4Tetrachloroethene       1 U         79-34-51,1,2,2-Tetrachloroethane       1 U         106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U	10061-02-6	trans-1,3-Dichloropropene	1	ָּט ו
591-78-62-Hexanone       5 U         127-18-4Tetrachloroethene       1 U         79-34-51,1,2,2-Tetrachloroethane       1 U         106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U			1	U
127-18-4Tetrachloroethene       1 U         79-34-51,1,2,2-Tetrachloroethane       1 U         106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U	108-10-1	4-Methyl-2-pentanone	5	U
79-34-51,1,2,2-Tetrachloroethane       1 U         106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U	591-78-6	2-Hexanone	<b>!</b> 5 <b>!</b>	U
106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U	127-18-4	Tetrachloroethene	1	U ¦
106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U	79-34-5	1,1,2,2-Tetrachloroethane	1	U
108-88-3Toluene       1 U         108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U	106-93-4	1,2-Dibromoethane	1	ប
100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U			1	U
100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U			1	U
100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U	100-41-4	Ethylbenzene	1	ָּט ¦
541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U	100-42-5	Styrene	1	ָּט ן
541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U				
106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U			1	U :
95-50-11,2-Dichlorobenzene			1	U
96-12-81,2-Dibromo-3-chloropropane   1 U		· · · · · · · · · · · · · · · · · · ·	1	U
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# 1LCE

EPA SAMPLE NO

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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EDPM5	

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDPK9

Lab Sample ID: 6008.003

Date Received: 04/20/00

Lab File ID: F0888

Date Analyzed: 04/22/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CA	S NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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CONCENTRATION

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: FVLCS054 Date Received:

Lab File ID: F0893 Date Analyzed: 04/24/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	1	U
	Bromomethane	~ j	ט ו
	Vinyl chloride	5	į
	Chloroethane		Ū
	Methylené chloride	- j 2	U
67-64-1	*	5	U
	Carbon disulfide	- i 1	U
	1,1-Dichloroethene	~ i 1	ע
	1,1-Dichloroethane	-   1	U
	cis-1,2-Dichloroethene	- [ 1	U
	trans-1,2-Dichloroethene	-   1	U
67-66-3	Chloroform	1	U
	1,2-Dichloroethane	- [	İ
	2-Butanone	- i 5	υ
	Bromochloromethane	-i i	[U i
	1,1,1-Trichloroethane	== · *	ט !
	Carbon tetrachloride	- i - 5	
	Bromodichloromethane	<b>-</b> !	Ū
	1,2-Dichloropropane	- i - 5	: :
	cis-1,3-Dichloropropene	-   5	. —
	Trichloroethene	-   5	jj
	Dibromochloromethane	:	i <del>u i</del>
	1,1,2-Trichloroethane	- i - 4	
71-43-2		- <u>i</u>	::
	trans-1,3-Dichloropropene	<b>-</b> !	υ i
	Bromoform	-   - 5	: - :
	4-Methyl-2-pentanone	<b>-</b> !	Ū
	2-Hexanone	<b>-</b> :	Ū
	Tetrachloroethene	-; 5	i
	1,1,2,2-Tetrachloroethane	- i i	i <del>ū</del>
	1,2-Dibromoethane	- 4	: :
108-88-3		<b>-</b> :	i <del>u -</del> i
	Chlorobenzene	- i - 1	וֹט וֹ
	Ethylbenzene	<b></b>	U
100-42-5		<b>-</b> !	Ū
	Xylenes (total)	- :	ָט ו
	1,3-Dichlorobenzene	<b>-</b> :	ָ ע
	1,4-Dichlorobenzene	$\frac{1}{4}$	: -
	1,2-Dichlorobenzene	<b>-</b> :	Ū
	1,2-Dibromo-3-chloropropane	<b>-</b> !	ן טן
	1,2,4-Trichlorobenzene		ט ו
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# LOW CONC. WATER SEMIVOLATILE SURROGATE RECOVERY STCB

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

<b>2DC NO:</b> EDEK	:.ov sas	Case No.: 27986	røp Code: bDP

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0	l	¦ SL	¦ ZL	69	\ ZL	09	¦ 89	EDBWS	•
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0	! !	59	₹9	79	٤9	6₹	95	EDBITS	•
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0		₹9	87	1 49	٤9	<u> </u>	99	EDBFO	•
. 0		L8	64	IL	<b>7</b> 6	<u>ξ</u> ε9	89	ЕДБКЭ	•
0		₽ L	68	¦ 58	₹8	; 9 <i>L</i>	I B	2FG260	:
0		83	LL	69	₹6	09	L9	SBLK27	!TO
===	=====	=====	=====	=====	=====	=====	=====	=======================================	-
TUO		%EC #	%REC #	* SEEC #	* PEC #	%BEC #	* SEC	SAMPLE NO.	í
TOT	OTHER	TBP	SEP	BHP ,	HqT	LBP	ZBN	EDY	i

(STT-0E) (53-150)SEEC OC PIWILS

TBP = 2,4,6-Tribromophenol (0ET-ST) SEP = 2-Fluorophenol (IZI-SI) bHr = byeuoj-q2 (STT-ST) IbH = Ierbyenlj-qj4 (18-140) FBP = 2-Fluorobiphenyl NBZ = Nitrobenzene-d5

D Surrogate diluted out. \* Values outside of contract required QC limits. # Column to be used to flag recovery values.

LOW CONC. WATER SEMIVOLATILE LAB CONTROL SAMPLE RECOVERY

SLCS60

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: SVOL592

LCS Lot No.:

Lab File ID: H0927

Date Extracted: 04/23/00

LCS Aliquot: 1000 (uL)

Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

	AMOUNT	AMOUNT		
	ADDED	RECOVERED		QC
COMPOUND	(ng)	(ng)	%REC #	LIMITS
	======	========	=====	=====
Phenol	40000	37000	92	40-120
bis(2-Chloroethyl)ether	20000	19000	95	50-110
2-Chlorophenol	40000	38000	95	50-110
N-Nitroso-di-n-propylamine	20000	18000	90	30-110
Hexachloroethane	20000	10000	50	20-110
Isophorone	20000	13000	65	50-110
Naphthalene	20000	17000	85	30-110
4-Chloroaniline	40000	28000	1 70	10-120
2,4,6-Trichlorophenol	40000	31000	,78	40-120
2,4-Dinitrotoluene	20000	12000	60	30-120
Diethylphthalate	20000	14000	70	50-120
N-Nitrosodiphenylamine	20000	11000	55	30-110
Hexachlorobenzene	20000	13000	65	40-120
Benzo(a)pyrene	20000	14000	70	50-120
	1 1	! !	l	l 

- # Column to be used to flag LCS recovery with an asterisk.
- \* Values outside of QC limits.

LCS Recovery: 0 outside limits out of 14 total.

COMMENTS:	

SBLK27

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: SVOB700 Date Extracted: 04/23/00

Lab File ID: H0926 Date Analyzed: 05/05/00

Instrument ID: H-HP5973 Time Analyzed: 0043

# THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

[	EPA	LAB	LAB	DATE
1	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
	=======================================	=======================================	========	=======
01		SVOL592	H0927	05/05/00
02	EDPK9	6004.002	H0928	05/05/00
03	EDPL0	6004.003	H0929	05/05/00
04		6004.004	H0930	05/05/00
05	EDPL2	¦6004.005	H0931	05/05/00
06	EDPL3	6004.006	H0932	05/05/00
07¦	EDPL4	6004.007	H0933	05/05/00
08	EDPL5	6004.008	H0937	05/05/00
09		6004.009	H0938	05/05/00
10	EDPL7	¦6004.010	H0939	05/05/00
11	EDPL8	6004.011	H0940	05/05/00 ¦
12	EDPMO	6004.013	H0941	05/05/00
13		6008.001	H0942	05/05/00
14	EDPM2	6008.002	H0943	05/05/00
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COMMENTS:	

# 1LCB

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SBLK27

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: SVOB700 Date Received:

Lab File ID: H0926 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

	•	CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
108-95-2 111-44-4 95-57-8 95-48-7 108-60-1 106-44-5 621-64-7 98-95-3 78-59-1 88-75-5 105-67-9 111-91-1 120-83-2	Phenolbis(2-Chloroethyl)ether2-Chlorophenol2,2-oxybis(1-Chloropropane)4-MethylphenolN-Nitroso-di-n-propylamineHexachloroethaneNitrobenzeneIsophorone2-Nitrophenol2,4-Dimethylphenolbis(2-Chloroethoxy)methane2,4-DichlorophenolNaphthalene	(ug/L) 555555555555555555555555555555555555	ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם
106-47-8 87-68-3 59-50-7 91-57-6 77-47-4 88-06-2 91-58-7 88-74-4 131-11-3 208-96-8 606-20-2	Naphthalene4-Chloroaniline4-Chloro-3-methylphenol2-Methylnaphthalene1-Hexachlorocyclopentadiene2,4,6-Trichlorophenol2,4,5-Trichlorophenol2-Chloronaphthalane2-NitroanilineDimethylphthalateAcenaphthylene2,6-Dintrotoluene3-Nitroaniline	5 5 5 5 5 5 5 5 20 5 5 5 5 5 5 5 5 5 5 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

SBLK27

					; SBLK27
Lab	Name: PDP	ANALYTICAL	SERVICES	Contract: 68-D7-0004	

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: SVOB700 Date Received:

Lab File ID: H0926 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO. COMPOUND	CONCENTRATION (ug/L)	Q
51-28-52, 4-Dinitrophenol   100-02-74-Nitrophenol   132-64-9Dibenzofuran   121-14-22, 4-Dinitrotolue   84-66-2Diethylphthalate   7005-72-34-Chlorophenyl-p   86-73-7Fluorene   100-01-64-Nitroaniline   534-52-14, 6-Dinitro-2-me   86-30-6N-Nitrosodiphenyl-ph   118-74-1Hexachlorobenzer   87-86-5Pentachlorophenol   85-01-8Phenanthrene   120-12-7Anthracene   84-74-2Butylphthal   206-44-0Pyrene   85-68-7Benzo(a) anthrace   218-01-9	20 5 ene 6 5 chenylether 7 5 cethylphenol 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	ם מ מ מ מ מ מ מ מ מ

(1) - Cannot be separated from Diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS

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Lab Name: PDP ANALYTICAL SERV	VICES
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Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: SVOB700 Date Received:

Lab File ID: H0926 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

•

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.				
2		<u> </u>		
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13		<u> </u>	!	
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16.		ļ	<u> </u>	
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28.				
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OLC02

EDPK9

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.002 Date Received: 04/19/00

Lab File ID: H0928 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO. COMPOUND CONCENTRATION (ug/L) Q

		<del>,</del>		
108-95-2	Phenol	1   	5	U U
	bis(2-Chloroethyl)ether	<u> </u>		U
	2-Chlorophenol	1   	5	; -
95-48-7	2-Methylphenol		5	IJ
	2,2'-oxybis(1-Chloropropane)		5	: -
106-44-5	4-Methylphenol	! !	5	: -
	N-Nitroso-di-n-propylamine	1	_	U
	Hexachloroethane	!	5	l U
	Nitrobenzene		5	IJ
	Isophorone		5	l U
88-75-5	2-Nitrophenol	!	J.	11
	2,4-Dimethylphenol	!	5	IJ
	bis(2-Chloroethoxy) methane	! !	5	: -
	2,4-Dichlorophenol	! !	5	IJ
	Naphthalene	! !	5	ប
	4-Chloroaniline	( !	5	
	Hexachlorobutadiene	! !	5 I	
	4-Chloro-3-methylphenol	! 		IJ
91 57 6	2-Methylnaphthalene		5 i	
77-47-4	Hexachlorocyclopentadiene	( !	- '	l U
	2,4,6-Trichlorophenol	( !	5	. –
	2,4,5-Trichlorophenol	! !	20	
	2-Chloronaphthalane	( !	20 t	_
	2-Chioronaphcharane	<b>!</b> [	20	
		! !	20 i	
731-11-3	Dimethylphthalate	ł I	5 i	
	Acenaphthylene	1 1		_
	2,6-Dintrotoluene	! !	20	U.
		t I		
03-32-9	Acenaphthene	l t	5	ı U I
		1		1

EDPK9

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.002 Date Received: 04/19/00

Lab File ID: H0928 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

	•	CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
51-28-5	2,4-Dinitrophenol	- i 20	U
100-02-7	4-Nitrophenol	-   20	U
	Dibenzofuran	<u> </u>	U
	2,4-Dinitrotoluene	_ ·	U
	Diethylphthalate	<del>-</del> :	U
	4-Chlorophenyl-phenylether_	• :	U
86-73-7		• !	U
	4-Nitroaniline		U
	4,6-Dinitro-2-methylphenol_		U
	N-Nitrosodiphenylamine (1) $\_$		U
	4-Bromophenyl-phenylether	_ ! 5	U
	Hexachlorobenzene	_   5	U
87-86-5	Pentachlorophenol	_   20	U
85-01-8	Phenanthrene	_	ן ט
	Anthracene	[	U
84-74-2	Di-n-butylphthalate	_	U
206-44-0	Fluoranthene	[	U
129-00-0	Pyrene	- <b> </b> 5	ן טן
85-68-7	Butylbenzylphthalate	5	ן ט ן
91-94-1	3,3'-Dichlorobenzidine	<b>~  </b> 5	U I
56-55-3	Benzo(a)anthracene	-   5	ן ט
218-01-9	Chrysene	<b>-</b>   5	ן ט
117-81-7	bis(2-Ethylhexyl)phthalate	- - 5	U
117-84-0	Di-n-octylphthalate		וט
	Benzo(b)fluoranthene	5	U
	Benzo(k) fluoranthene	5	ט
	Benzo(a)pyrene		[υ.
	Indeno(1,2,3-cd)Pyrene	5	U
53-70-3	Dibenz (a, h) anthracene	- i 5	iū i
	Benzo(g,h,i)perylene	_ i	U
<u> </u>			.

(1) - Cannot be separated from Diphenylamine

# THICE

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY	THENTTETEN	COMPOUNTS
TUNIMITABLE	THURNITETER	COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPK9

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.002

Date Received: 04/19/00

Lab File ID: H0928

Date Extracted: 04/23/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL)

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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6. 7.				
8 . 9 .				
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# 1LCB

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDPL0

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.003 Date Received: 04/19/00

Lab File ID: H0929 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
		_	
108-95-2		•	U
1 111-44-4	bis(2-Chloroethyl)ether	:	U
	2-Chlorophenol	5	! !
	2-Methylphenol	5	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5	i U
	4-Methylphenol	j 5	U
	N-Nitroso-di-n-propylamine	5	; - ;
	Hexachloroethane	!	U
	Nitrobenzene		ן ט
78-59-1			ן טן
	2-Nitrophenol	• :	U
	2,4-Dimethylphenol	. :	U
111-91-1	bis(2-Chloroethoxy)methane		ן ט
	2,4-Dichlorophenol	:	U
	Naphthalene	5	! "
•	4-Chloroaniline	5	! - !
	Hexachlorobutadiene	5	! "
	4-Chloro-3-methylphenol		U
	2-Methylnaphthalene		U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	. !	U
95-95-4	2,4,5-Trichlorophenol		U
91-58-7	2-Chloronaphthalane	•	U
	2-Nitroaniline		- 1
131-11-3	Dimethylphthalate	. :	U
	Acenaphthylene	_	ט
606-20-2	2,6-Dintrotoluene	. 1	ן ט
99-09-2	3-Nitroaniline		ן ט
83-32-9	Acenaphthene	5	ן ט

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPLO

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.003 Date Received: 04/19/00

Lab File ID: H0929 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
100-02-7   132-64-9   121-14-2   84-66-2   7005-72-3   86-73-7   100-01-6   534-52-1   86-30-6   101-55-3   18-74-1   87-86-5   120-12-7   84-74-2   206-44-0   129-00-0   129-00-0   156-55-3   218-01-9	4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluoranthenePyreneButylbenzylphthalate3,3'-DichlorobenzidineBenzo(a)anthracene		

(1) - Cannot be separated from Diphenylamine

# TENTATIVELY IDENTIFIED COMPOUNDS

EDPL0

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.003 Date Received: 04/19/00

Lab File ID: H0929 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
3.	· *			-
4.				-
5. 6.		<u> </u>	ļ	-
7.				
8. 9.			ļ	- {
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19. 20.			<u> </u>	-
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27.		<u> </u>		-
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29. 30.				- }
				-

EDPL1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.004 Date Received: 04/19/00

Lab File ID: H0930 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO. COMPOUND	CONCENTRATION (ug/L)	Q
108-95-2Phenol 111-44-4bis (2-Chloroethyl) ether 95-57-82-Chlorophenol 95-48-72-Methylphenol 108-60-12,2'-oxybis (1-Chloropropane) 106-44-54-Methylphenol 621-64-7Hexachloroethane 98-95-3Nitrobenzene 78-59-1Isophorone 88-75-52-Nitrophenol 105-67-92,4-Dimethylphenol 111-91-1bis (2-Chloroethoxy) methane 120-83-22,4-Dichlorophenol 91-20-3Naphthalene 106-47-84-Chloroaniline 87-68-3	555555555555555555555555555555555555555	ם ט ט ט ט

EDPL1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: 6004.004 Date Received: 04/19/00

Lab File ID: H0930 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO. COMPOUND CONCENTRATION (ug/L) Q

		(-3, -,	~
E1 22 E	2 4 Dinitrophonal	20	1
	2,4-Dinitrophenol		
	4-Nitrophenol	20	: :
	Dibenzofuran	_	U
	2,4-Dinitrotoluene		U
	Diethylphthalate		U
	4-Chlorophenyl-phenylether		U
	Fluorene		U
	4-Nitroaniline	20	
	4,6-Dinitro-2-methylphenol	20	
86-30-6	N-Nitrosodiphenylamine (1)		U
101-55-3	4-Bromophenyl-phenylether		U
	Hexachlorobenzene	5	U
	Pentachlorophenol	20	¦U '
85-01-8	Phenanthrene	5	U
	Anthracene	5	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	5	ប
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	5	ប
91-94-1	3,3'-Dichlorobenzidine	5	ĺυ
56-55-3	Benzo(a) anthracene	5	ប
	Chrysene		Ìυ
	bis(2-Ethylhexyl)phthalate		ĺΰ
	Di-n-octylphthalate	5	Ū
205-99-2	Benzo(b) fluoranthene		Ū
	Benzo(k) fluoranthene		บ
	Benzo(a)pyrene		ĺΰ
	Indeno(1,2,3-cd)Pyrene	_	บั
53-70-3	Dibenz(a,h)anthracene		Ū
191-24-2	Benzo(g,h,i)perylene		Ū
			į -
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(1) - Cannot be separated from Diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS

EDPL1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.004

Date Received: 04/19/00

Lab File ID: H0930

Date Extracted: 04/23/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.	,			
3				
4. 5.				
6.				
7		<u> </u>		
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10.   11.		İ		<u> </u>
12.				
13.   14.		]	]	<u> </u>
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16. 17.				
18.				
19. 20.		]		
21				
22.		İ		
24.				
26.				
27.				
29.				
30.				

EDPL2

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.005 Date Received: 04/19/00

Lab File ID: H0931 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION (ug/L) COMPOUND

108-95-2Phenol	5	i i
111-44-4bis(2-Chloroethyl)ether	5	ีบ ไ
95-57-82-Chlorophenol	5	บ
95-48-72-Methylphenol	5	iu i
108-60-12,2'-oxybis(1-Chloropropane)	_ )	โบ โ
106-44-54-Methylphenol		Ū
621-64-7N-Nitroso-di-n-propylamine	5	U
67-72-1Hexachloroethane	5	U
98-95-3Nitrobenzene	·   5	Ū
78-59-1Isophorone	5	U
88-75-52-Nitrophenol	5	ีบ I
105-67-92,4-Dimethylphenol	5	ี้ บี
111-91-1bis(2-Chloroethoxy)methane	5	וֹ עוֹ
120-83-22,4-Dichlorophenol	5	י די ו
91-20-3Naphthalene	5	Ū
106-47-84-Chloroaniline	5	İυ
87-68-3Hexachlorobutadiene	5	ប
59-50-74-Chloro-3-methylphenol	5	បៃ
91-57-62-Methylnaphthalene	5	U
77-47-4Hexachlorocyclopentadiene	5	ן מ
88-06-22,4,6-Trichlorophenol	5	U
95-95-42,4,5-Trichlorophenol	20	U
91-58-72-Chloronaphthalane	5	U
88-74-42-Nitroaniline	20	U
131-11-3Dimethylphthalate	5	ប
208-96-8Acenaphthylene	5	U
606-20-22,6-Dintrotoluene	- 1 5	U
99-09-23-Nitroaniline	20	U
83-32-9Acenaphthene	-  - 	ָ ט

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPL2

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Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.005 Date Received: 04/19/00

Lab File ID: H0931 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
51-28-5 100-02-7 132-64-9 121-14-2 84-66-2	2,4-Dinitrophenol	20 20 5 5	U
86-73-7 100-01-6 534-52-1 86-30-6 101-55-3	4-Chlorophenyl-phenyletherFluorene4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzene	5 20 20 5 5	: :
87-86-5 85-01-8 120-12-7 84-74-2	Pentachlorophenol	20 5 5 5 5	: - :
85-68-7 91-94-1 56-55-3 218-01-9 117-81-7	Butylbenzylphthalate	5 5 5 5 5	ַ עם עם
205-99-2 207-08-9 50-32-8 193-39-5 53-70-3	Benzo(b) fluorantheneBenzo(k) fluorantheneBenzo(a) pyreneIndeno(1,2,3-cd) PyreneDibenz(a,h) anthracene	5 5 5 5 5	บ บ บ บ บ

(1) - Cannot be separated from Diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS

EDPL2

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.005

Date Received: 04/19/00

Lab File ID: H0931

Date Extracted: 04/23/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1	,			-
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14				
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30.				

EDPL3

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDPK9

Lab Sample ID: 6004.006 Date Received: 04/19/00

Lab File ID: H0932 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
<del></del>		T	
108-95-2		•	ע
	bis(2-Chloroethyl)ether	1 5	U
95-57-8	2-Chlorophenol	1 5	ע
	2-Methylphenol	5	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5	U
106-44-5	4-Methylphenol	1 5	U
621-64-7	N-Nicroso-di-n-propylamine	1 5	U
	Hexachloroethane	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	, 5	U
105-67-9	2,4-Dimethylphenol	1 5	U
111-91-1	bis(2-Chloroethoxy) methane	1 5	U
120-83-2	2,4-Dichlorophenol	5	U
91-20-3	Naphthalene	1 5	U !
106-47-8	4-Chloroaniline	1 5	U
87-68-3	Hexachlorobutadiene	1 5	U
59-50-7	4-Chloro-3-methylphenol	5	U
	2-Methylnaphthalene	5	U
	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalane	5	U
	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	1 5	U
	Acenaphthylene		U
	2,6-Dintrotoluene	} 5	U .
	3-Nitroaniline	20	U
1	Acenaphthene	. 5	U
i			

EDPL3

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_\_ SDG No.: EDPK9

Lab Sample ID: 6004.006 Date Received: 04/19/00

Lab File ID: H0932 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
	2,4-Dinitrophenol	20	:
	4-Nitrophenol	.   20	U
	2,4-Dinitrotoluene		I II
1 121-14-2	Diethylphthalate	. !	I U
1 7005-72-3	4-Chlorophenyl-phenylether_		U
96-73-7	Fluorene		U
	4-Nitroaniline	20	•
	4,6-Dinitro-2-methylphenol	20	-
	N-Nitrosodiphenylamine (1)		ט
	4-Bromophenyl-phenylether		บ
	Hexachlorobenzene		ט
•	Pentachlorophenol	20	
	Phenanthrene	- i	Ū
	Anthracene	• !	Ū
	Di-n-butylphthalate	• :	บ
	Fluoranthene	• •	Ū
129-00-0			ĺΰ
	Butylbenzylphthalate		Ū
	3,3'-Dichlorobenzidine	<b>-</b> :	์ บ
	Benzo(a) anthracene	<b>-</b> :	Ū
	Chrysene	. :	U
	bis(2-Ethylhexyl)phthalate	· i 5	ĺΰ
	Di-n-octylphthalate		ĺυ
	Benzo(b) fluoranthene	5	Ū
	Benzo(k)fluoranthene	5	ប
50-32-8	Benzo(a)pyrene		<b>U</b> .
193-39-5	Indeno(1,2,3-cd) Pyrene	-   5	U
	Dibenz(a,h)anthracene	- 1 5	U
	Benzo(g,h,i)perylene	5	ľυ
! 1			!

(1) - Cannot be separated from Diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPL3

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDPK9

Lab Sample ID: 6004.006

Date Received: 04/19/00

Lab File ID: H0932

Date Extracted: 04/23/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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28.				
29.		 	<u></u>	

# 1LCB

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDPL4

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.007 Date Received: 04/19/00

Lab File ID: H0933 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

108-95-2Phenol	CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
	111-44-4	bis (2-Chloroethyl) ether2-Chlorophenol2-Methylphenol2,2'-oxybis (1-Chloropropane)4-MethylphenolN-Nitroso-di-n-propylamineHexachloroethaneNitrobenzeneIsophorone2-Nitrophenol2,4-Dimethylphenolbis (2-Chloroethoxy) methane2,4-DichlorophenolNaphthalene4-Chloroaniline4-Chloro-3-methylphenol2-Methylnaphthalene4-Chlorocyclopentadiene2,4,6-Trichlorophenol2,4,5-Trichlorophenol2-Chloronaphthalane2-NitroanilineDimethylphthalateAcenaphthylene2,6-Dintrotoluene3-Nitroaniline	555555555555555555555555555555555555555	ם מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004 EDPL4

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.007 Date Received: 04/19/00

Lab File ID: H0933 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO. COMPOUND CONCENTRATION (ug/L) Q

	<b>5</b>	
51-28-52 4-Dinitrophenol	2 (	טע
51-28-52,4-Dinitrophenol	•	טוט
100-02-74-Nitrophenol	:	
132-64-9Dibenzofuran		ם לם
121-14-22,4-Dinitrotoluene	·	5   U
84-66-2Diethylphthalate		5 U
7005-72-34-Chlorophenyl-phenylether_		5   U
86-73-7Fluorene		5 U
100-01-64-Nitroaniline	20	ט ט ו
534-52-14,6-Dinitro-2-methylphenol_	., 20	ט ט ו
86-30-6N-Nitrosodiphenylamine (1)		5 U
101-55-34-Bromophenyl-phenylether	' 5	5   U
118-74-1Hexachlorobenzene	¦	5   U
87-86-5Pentachlorophenol	20	ן ט¦ט
85-01-8Phenanthrene	}	5   U
120-12-7Anthracene		5   U
84-74-2Di-n-butylphthalate		5   U
206-44-0Fluoranthene		5   U
129-00-0Pyrene	9	5 U
85-68-7Butylbenzylphthalate		5   U
91-94-13,3'-Dichlorobenzidine	1	5   U
56-55-3Benzo(a)anthracene	}	5   U
218-01-9Chrysene	!	5   U
117-81-7bis(2-Ethylhexyl)phthalate	[ ]	5   U
117-84-0Di-n-octylphthalate		5 U
205-99-2Benzo(b) fluoranthene		5   U
207-08-9Benzo(k)fluoranthene	1	5   U
50-32-8Benzo(a)pyrene		5   U ,
193-39-5Indeno(1,2,3-cd)Pyrene	1	5   U
53-70-3Dibenz(a,h)anthracene	1	5   U
191-24-2Benzo(g,h,i)perylene	! 1	5 {U
	1 1	

(1) - Cannot be separated from Diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDPK9

Date Received: 04/19/00

Lab Sample ID: 6004.007

Date Extracted: 04/23/00

Lab File ID: H0933

Sample Volume: 1000 (mL)

Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPL5

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.008 Date Received: 04/19/00

Lab File ID: H0937 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
	<u> </u>	<del>,                                      </del>	<del>,</del> ,
108-95-2	Phenol	5	U
111-44-4	bis(2-Chloroethyl)ether	5	ן טן
95-57-8	2-Chlorophenol	5	ן טן
95-48-7	2-Methylphenol	5	ן טן
108-60-1	2,2'-oxybis(1-Chloropropane)	5	U
106-44-5	4-Methylphenol	5	U
	N-Nitroso-di-n-propylamine	5	U
67-72-1	Hexachloroethane	5	U
	Nitrobenzene	., 5	U
	Isophorone	5	\U \
	2-Nitrophenol	5	U
	2,4-Dimethylphenol	5	ן טן
	bis(2-Chloroethoxy)methane	•	U !
	2,4-Dichlorophenol		U
	Naphthalene		U
	4-Chloroaniline	:	U
•	Hexachlorobutadiene	5	U
·	4-Chloro-3-methylphenol	5	1 7
	2-Methylnaphthalene	5	U
	Hexachlorocyclopentadiene	•	U
	2,4,6-Trichlorophenol	:	U
·	2,4,5-Trichlorophenol	20	: :
	2-Chloronaphthalane	:	U
•	2-Nitroaniline	20	! - !
-	Dimethylphthalate	· -	U
	Acenaphthylene		U
	2,6-Dintrotoluene	:	ן טן
•	3-Nitroaniline	20	: :
83-32-9 !	Acenaphthene	i 5	U [
'		· ————	'

EDPL5

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.008 Date Received: 04/19/00

Lab File ID: H0937 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	· COMPOUND	CONCENTRATION (ug/L)	Q
100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 120-12-7 84-74-2 129-00-0 85-68-7 129-00-0 129-00-0 117-81-7 117-84-0 205-99-2 207-08-9 193-39-5 193-39-5	2,4-Dinitrophenol4-Nitrophenol4-NitrophenolDibenzofuran2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenyletherFluorene4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneDi-n-butylphthalateButylbenzylphthalateButylbenzylphthalate	5 5 5 0 0 0 5 5 5 0 5 5 5 5 5 5 5 5 5 5	ם ם ם ם ם ם ם

#### TENTATIVELY IDENTIFIED COMPOUNDS

EDPL5

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: 6004.008

Date Received: 04/19/00

Lab File ID: H0937

Date Extracted: 04/23/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

		f !	EST. CONC.	! ^
	COMPOUND NAME	RT	(ug/L)	Q
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EDPL6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDPK9

Lab Sample ID: 6004.009

Date Received: 04/19/00

Lab File ID: H0938

Date Extracted: 04/23/00

Sample Volume: 1000 (mL)

606-20-2----2,6-Dintrotoluene 99-09-2-----3-Nitroaniline

83-32-9-----Acenaphthene

Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL)

Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

	,		CONCENTRATION	
	CAS NO.	COMPOUND	(ug/L)	Q
Ï	108-95-2	-Phenol	5	ט
i		-bis(2-Chloroethyl)ether	•	U
i	95-57-8	-2-Chlorophenol	!	U
į	95-48-7		•	ט !
į		-2,2'-oxybis(1-Chloropropane)	· =	ט !
i	106-44-5		:	Ū
į		-N-Nitroso-di-n-propylamine	· -	U i
i		-Hexachloroethane		Ū
į	98-95-3		5	U
į	78-59-1			U
	88-75-5		5	U
į		-2,4-Dimethylphenol	5	U
- 1		-bis(2-Chloroethoxy) methane	5	U
-	120-83-2	-2,4-Dichlorophenol	1 5	U
1	91-20-3	-Naphthalene	5	U
i	106-47-8	-4-Chloroaniline	5	U
- 1	87-68-3	-Hexachlorobutadiene	5	ן ט
l		-4-Chloro-3-methylphenol	1 5	U
i	91-57-6	-2-Methylnaphthalene	5	ן טן
1	77-47-4	-Hexachlorocyclopentadiene	5	U
i	88-06-2	-2,4,6-Trichlorophenol	5	U
ł	95-95-4	-2,4,5-Trichlorophenol_	20	U
i	91-58-7	-2-Chloronaphthalane	5	ן טן
ł	88-74-4		20	• - •
į		-Dimethylphthalate	5	U
1	208-96-8	-Acenaphthylene	5	U

5 | U

5 U

20 U

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPL6

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.009 Date Received: 04/19/00

Lab File ID: H0938 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

TENTATIVELY IDENTIFIED COMPOUNDS

Contract (2 D7 0004

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.009 Date Received: 04/19/00

Lab File ID: H0938 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EDPL7

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.010 Date Received: 04/19/00

Lab File ID: H0939 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
	Phenol bis(2-Chloroethyl)ether 2-Chlorophenol	5	ם ט
108-60-1	2-Methylphenol 2,2'-oxybis(1-Chloropropane) 4-Methylphenol	5 5	ַ ט ט
67-72-1 98-95-3	N-Nitroso-di-n-propylamineHexachloroethaneNitrobenzeneIsophorone	5	U U U
88-75-5 105-67-9	2-Nitrophenol 2,4-Dimethylphenol bis(2-Chloroethoxy)methane	5	ָ ע ע
120-83-2 91-20-3	2,4-Dichlorophenol	5	ם     ט
59-50-7 91-57-6	Hexachlorobutadiene 4-Chloro-3-methylphenol 2-Methylnaphthalene	5 5	ם ט
88-06-2 95-95-4	Hexachlorocyclopentadiene 2,4,6-Trichlorophenol	5 20	; -
88-74-4 131-11-3	2-Chloronaphthalane 2-Nitroaniline Dimethylphthalate Acenaphthylene	20 5	บ   บ   บ
606-20-2	3-Nitroaniline	5 20	Ū.

EDPL7

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.010 Date Received: 04/19/00

Lab File ID: H0939 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
51 22 5	2 4 Pinibanhanal	1	
1 100 00 7	2,4-Dinitrophenol	20	: :
	4-Nitrophenol		ן ט
1 132-64-9	Dibenzofuran		! - :
1 121-14-2	2,4-Dinitrotoluene		ָּט ייי
1 84-66-2	Diethylphthalate	. !	U
1 /005-/2-3	4-Chlorophenyl-phenylether	. •	U
	Fluorene	. •	U
	4-Nitroaniline	20	: :
	4,6-Dinitro-2-methylphenol_		: :
86-30-6	N-Nitrosodiphenylamine (1)	5	U
101-55-3	4-Bromophenyl-phenylether	5	ן ט
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	20	
85-01-8	Phenanthrene		U
	Anthracene	5	U
	Di-n-butylphthalate	. ! 5	U
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	·   5	U !
91-94-1	3,3'-Dichlorobenzidine	· <b> </b> 5	ן טן
56-55-3	Benzo(a)anthracene	·   5	ן ט
218-01-9	Chrysene	5	U
117-81-7	bis(2-Ethylhexyl)phthalate	` <b> </b> 5	ן טן
	Di-n-octylphthalate		U
205-99-2	Benzo(b)fluoranthene	·   5	U
207-08-9	Benzo(k)fluoranthene	` <del> </del> 5	ľυ
50-32-8	Benzo(a) pyrene		ÜΪ
193-39-5	Indeno(1,2,3-cd)Pyrene	` i 5	וֹט וֹ
53-70-3	Dibenz(a,h)anthracene	·   5	Ϊ́υ Ι
191-24-2	Benzo(g,h,i)perylene		Ū
		·	
•		·	·'

#### TENTATIVELY IDENTIFIED COMPOUNDS

	EDPL7
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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.010

Date Received: 04/19/00

Lab File ID: H0939

Date Extracted: 04/23/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.				
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11.				
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#### 1LCB

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDPL8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDPK9

Lab Sample ID: 6004.011 Date Received: 04/19/00

Lab File ID: H0940 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
100 05 2	Phenol		U
			ָ װ
	bis(2-Chloroethyl)ether	5	: -
_		5	! " !
	2-Methylphenol	1	10
	2,2'-oxybis(1-Chloropropane)	5	10
	4-Methylphenol	1 5	! !
	N-Nitroso-di-n-propylamine	5	
A CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR	Hexachloroethane	!	U
-	Nitrobenzene	5	
	Isophorone	5	: :
	2-Nitrophenol	5	! " !
	2,4-Dimethylphenol	•	U
	bis(2-Chloroethoxy)methane	:	U
_	2,4-Dichlorophenol	5	: - :
	Naphthalene	5	U
	4-Chloroaniline	5	U
	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	. *	U
77-47-4	Hexachlorocyclopentadiene	. 1	ן ה
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U !
91-58-7	2-Chloronaphthalane	5	U !
88-74-4	2-Nitroaniline	1 20	U
131-11-3	Dimethylphthalate	·	U
	Acenaphthylene	·	U
	2,6-Dintrotoluene	`}	U
	3-Nitroaniline	20	U
	Acenaphthene	` <del>\</del> 5	וֹ עוֹי
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EDPL8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDPK9

Lab Sample ID: 6004.011 Date Received: 04/19/00

Lab File ID: H0940 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
	2 4 Dinitrophonal	20	
	2,4-Dinitrophenol	-   20	
	Dibenzofuran	. :	ט
	2,4-Dinitrotoluene		บ
~		- !	Ü
7005 72 2	Diethylphthalate 4-Chlorophenyl-phenylether		U
/005-/2-3   06 73 7	Fluorene	<b>-</b> :	ט
00-/3-/	4-Nitroaniline	- 20	: :
1 574 57 1	4.6-Dinitro-2-methylphenol	20	
534-54-1   66-50-6	N Nitroadinhamilaning (1)	-   20	ט ו
86~3U~6	N-Nitrosodiphenylamine (1)	-	ט
1 101-55-3	4-Bromophenyl-phenylether	-	U
1 118-74-1	Hexachlorobenzene	-   20	1
8/-86-5	Pentachlorophenol	-   20	: :
85-01-8	Phenanthrene	• !	U
	Anthracene	• !	U
	Di-n-butylphthalate	<b>-</b> !	U
	Fluoranthene	- !	U
129-00-0		- !	U .
¦ 85-68-7	Butylbenzylphthalate	_ •	ט
	3,3'-Dichlorobenzidine		U
	Benzo(a)anthracene		ָּט
	Chrysene	_	U
	bis(2-Ethylhexyl)phthalate		ן ט
117-84-0	Di-n-octylphthalate	- ! 5	U
205-99-2	Benzo(b) fluoranthene	5	ן ט
207-08-9	Benzo(k)fluoranthene		U
50-32-8	Benzo(a)pyrene		י ט
193-39-5	Indeno(1,2,3-cd)Pyrene	_ ! 5	U
53-70-3	Dibenz(a,h)anthracene		U
191-24-2	Benzo(g,h,i)perylene		ן ט
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#### TENTATIVELY IDENTIFIED COMPOUNDS

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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.011 Date Received: 04/19/00

Lab File ID: H0940 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EDPMO

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.013 Date Received: 04/19/00

Lab File ID: H0941 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

**EDPMO** 

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.013 Date Received: 04/19/00

Lab File ID: H0941 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
100-02-7   132-64-9   121-14-2   84-66-2   7005-72-3   86-73-7   100-01-6   534-52-1   86-30-6   101-55-3   18-74-1   87-86-5   120-12-7   84-74-2   206-44-0   129-00-0   129-00-0   129-00-0	4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluoranthenePyreneButylbenzylphthalate3,3'-DichlorobenzidineBenzo(a)anthracene	5 5 5 5 0 0 5 5 5 5 5 5 5 5 5 5 5 5 5 5	0 U U U U U U U U U U U U U U U U U U U

TENTATIVELY IDENTIFIED COMPOUNDS

EDPMO

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6004.013

Date Received: 04/19/00

Lab File ID: H0941

Date Extracted: 04/23/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1. 2.				
3. 4.				
6. 7.				
8 9 10.				
11.				
13. 14. 15.				
16. 17.				
18. 19. 20.				
21.				
23. 24. 25.				
26. 27.				
28. 29. 30.				
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EDPM1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6008.001 Date Received: 04/20/00

Lab File ID: H0942 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

	,	CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
			<del>                                     </del>
108-95-2		. 1 5	ן ט ן
111-44-4	bis(2-Chloroethyl)ether	5	U
95-57-8	2-Chlorophenol	·   5	U
95-48-7	2-Methylphenol	5	U
108-60-1	2,2'-oxybis(1-Chloropropane)	·	U
106-44-5	4-Methylphenol	.  5	U
621-64-7	N-Nitroso-di-n-propylamine	5	ן טן
	Hexachloroethane	5	U
	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
	2-Nitrophenol	`  ' 5	U
105-67-9	2,4-Dimethylphenol	·	U !
111-91-1	bis(2-Chloroethoxy) methane	·   5	U !
	2,4-Dichlorophenol	·	U
	Naphthalene	·	U
106-47-8	4-Chloroaniline	·   5	U
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	·	ן טן
	2-Methylnaphthalene	` <b>¦</b> 5	ן טן
	Hexachlorocyclopentadiene	·	U
	2,4,6-Trichlorophenol	`  5	U
	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalane	.   5	U
	2-Nitroaniline	20	U
	Dimethylphthalate		U
208-96-8	Acenaphthylene		U
606-20-2	2,6-Dintrotoluene	5	[ט
	3-Nitroaniline	20	TU
	Acenaphthene	5	U
	*	·	

EDPM1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDPK9

Lab Sample ID: 6008.001 Date Received: 04/20/00

Lab File ID: H0942 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	, COMPOUND	CONCENTRATION (ug/L)	٥
,		\-J, -,	<del>-</del>
   51-28-5	2,4-Dinitrophenol	20	U
	4-Nitrophenol	20	U
	Dibenzofúran	<b>-</b> 1	U
121-14-2	2,4-Dinitrotoluene	5	U
	Diethylphthalate	5	U
	4-Chlorophenyl-phenylether	5	ן ט
	Fluorene	5	U
100-01-5	4-Nitroaniline	20	U
•	4,6-Dinitro-2-methylphenol	, 20	U
	N-Nitrosodiphenylamine (1)	5	U
	4-Bromophenyl-phenylether	, 5	U
	Hexachlorobenzene	5	U
	Pentachlorophenol	20	U
	Phenanthrene	5	[U
120-12-7	Anthracene	5	U
84-74-2	Di-n-butylphthalate	5	ן טן
	Fluoranthene		ן ט
129-00-0	Pyrene	5	U
	Butylbenzylphthalate	5	U
	3,3'-Dichlorobenzidine	. 5	U
	Benzo(a) anthracene	5	ן ט
	Chrysene	5	U
117-81-7	bis(2-Ethylhexyl)phthalate	5	U !
	Di-n-octylphthalate		U
	Benzo(b) fluoranthene		ן ט
	Benzo(k) fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	U
193-39-5	Indeno(1,2,3-cd)Pyrene	5	U
	Dibenz(a,h)anthracene		lu !
191-24-2	Benzo(g,h,i)perylene	5	U

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPM1

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6008.001 Date Received: 04/20/00

Lab File ID: H0942 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.	1	i	l	
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13.	-			
14.		ļ ————		
15.	-	<u> </u>		i
16.				ii
17.			i	
18.		<u> </u>		
19.				
20.		<u> </u>		
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22.		l		
23.		1		
24.		1	1	
25.		! !		
26.				
27.	-			
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EDPM2

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDPK9

Lab Sample ID: 6008.002

Date Received: 04/20/00

Date Extracted: 04/23/00

Lab File ID: H0943

Sample Volume: 1000 (mL)

Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL)

Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION CAS NO. COMPOUND (ug/L) 108-95-2----Phenol 5 | U 111-44-4-----bis(2-Chloroethyl)ether 5 | U 95-57-8----2-Chlorophenol\_\_\_\_\_ 5 | U 95-48-7----2-Methylphenol 5. U 108-60-1----2,2'-oxybis(1-Chloropropane) 5 | U 106-44-5----4-Methylphenol 5 | U 5 | U 621-64-7----N-Nitroso-di-n-propylamine 67-72-1-----Hexachloroethane 98-95-3-----Nitrobenzene 5 | U 5 | U 78-59-1------Isophorone 88-75-5----2-Nitrophenol 5 | U 105-67-9-----2,4-Dimethylphenol 5 | U 5 | U 111-91-1-----bis(2-Chloroethoxy) methane 5 | U 120-83-2----2,4-Dichlorophenol 91-20-3-----Naphthalene 5 | U 106-47-8-----4-Chloroaniline 5 | U 5 | U 87-68-3-----Hexachlorobutadiene 5 | U 59-50-7-----4-Chloro-3-methylphenol 91-57-6----2-Methylnaphthalene 5 U 77-47-4-----Hexachlorocyclopentadiene 5 | U 5 | U 88-06-2----2,4,6-Trichlorophenol 95-95-4-----2,4,5-Trichlorophenol 20 U 91-58-7-----2-Chloronaphthalane 5 | U 20 U 88-74-4----2-Nitroaniline 131-11-3-----Dimethylphthalate 5 U 5 ¦ U 208-96-8-----Acenaphthylene 5 | U 606-20-2----2,6-Dintrotoluene 20 U 99-09-2----3-Nitroaniline 5 ¦ U 83-32-9-----Acenaphthene

77 5140	
EDPM2	

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

ab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6008.002 Date Received: 04/20/00

Lab File ID: H0943 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

•	•	CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
-		T	
51-28-5	2,4-Dinitrophenol	20	U
100-02-7	4-Nitrophenol	20	ן ען
132-64-9	Dibenzofuran		U !
121-14-2	2,4-Dinitrotoluene	5	ן טן
1 04 66 0	m	_	U
7005-72-3	diethylphthalate 4-Chlorophenyl-phenylether_	5	U
86-73-7	Fluorene		ן טן
	4-Nitroaniline	[	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	N-Nitrosodiphenylamine (1)	5	U
101-55-3	4-Bromophenyl-phenylether	_ <b> </b>	U
118-74-1	Hexachlorobenzene	- <del> </del> 5	U
87-86-5	Pentachlorophenol	20	U
	Phenanthrene		U
	Anthracene	5	U
84-74-2	Di-n-butylphthalate	<sup>-</sup>   5	ן טן
206-44-0	Fluoranthene	<sup>-</sup>   5	U
129-00-0	Pyrene	<b>-</b>	U
85-68-7	Butylbenzylphthalate		ן טן
91-94-1	3,3'-Dichlorobenzidine	<sup>-</sup>   5	ן טן
56-55-3	Benzo(a)anthracene		ן טן
1 218-01-9	Chrysene		U !
117-81-7	bis(2-Ethylhexyl)phthalate	5	U
117-84-0	Di-n-octylphthalate	<b>-</b>   5	U
205-99-2	Benzo(b) fluoranthene		U
	Benzo(k) fluoranthene	- <del> </del> 5	U
50-32-8	Benzo(a)pyrene		U
193-39-5	Indeno(1,2,3-cd)Pyrene	- <del> </del> 5	U
53-70-3	Dibenz(a,h)anthracene	5	U
191-24-2	Benzo(g,h,i)perylene		U
1		-   	

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPM2

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: 6008.002

Date Received: 04/20/00

Lab File ID: H0943

Date Extracted: 04/23/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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#### 1LCB

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SLCS60

Lab Name: PDP ANALYTICAL SERVICES

Contract: 68-D7-0004

Lab Code: PDP

Case No.: 27986

SAS No.: SDG No.: EDPK9

Lab Sample ID: SVOL592

Date Received:

Lab File ID: H0927

Date Extracted: 04/23/00

Sample Volume: 1000

Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL)

Dilution Factor: 1.0

Injection Volume: 1.0

(uL)

CONCENTRATION

CAS NO. COMPOUND (uq/L)37 108-95-2-----Phenol 111-44-4------bis(2-Chloroethyl)ether 19! 95-57-8-----2-Chlorophenol 38 | 95-48-7-----2-Methylphenol 5 U 108-60-1----2,2'-oxybis(1-Chloropropane) 5 | U 5 | U 106-44-5----4-Methylphenol 621-64-7----N-Nitroso-di-n-propylamine 18 67-72-1-----Hexachloroethane 10 98-95-3-----Nitrobenzene 5 | U 78-59-1-----Isophorone\_ 13 5 | Ū 88-75-5----2-Nitrophenol 105-67-9-----2,4-Dimethylphenol 5 U 111-91-1-----bis (2-Chloroethoxy) methane 5 | U | 120-83-2-----2,4-Dichlorophenol 5 | U 17 91-20-3-----Naphthalene 106-47-8-----4-Chloroaniline 28 | 5 | Ū 87-68-3-----Hexachlorobutadiene 5 | U 59-50-7-----4-Chloro-3-methylphenol 91-57-6----2-Methylnaphthalene 5 ¦ U 77-47-4-----Hexachlorocyclopentadiene 5 | U 88-06-2----2,4,6-Trichlorophenol 31 | 95-95-4-----2,4,5-Trichlorophenol 20 U 91-58-7----2-Chloronaphthalane\_\_\_ 5 | U 88-74-4----2-Nitroaniline 20 U 131-11-3-----Dimethylphthalate 5 | U 5 | U 208-96-8-----Acenaphthylene 5 (U 606-20-2----2,6-Dintrotoluene 99-09-2----3-Nitroaniline 20 U 83-32-9-----Acenaphthene 5 U

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

SLCS60

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDPK9

Lab Sample ID: SVOL592 Date Received:

Lab File ID: H0927 Date Extracted: 04/23/00

Sample Volume: 1000 (mL) Date Analyzed: 05/05/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

100-02-74-Nitrophenol   20	ָ טּוֹט נוֹט
86-73-7	מממממממממממ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	•
SUBJECT: Re	rview of Data ceived for Review on 5-19-00
	ephen L. Ostrodka, Chief (SMF-4J)  perfund Field Services Section  ta User: USE PA
TO: Da	ta User: USEPA W1271 00
SITE NAME:CASE NUMBER: Number and Type	is the data for the following case:  HIMCO LANDFILL (IN)  SDG NUMBER: EACF6  of Samples: 18 (WATER)
Sample Numbers: Laboratory:	PDP EDPNO-7  Hrs for Review: 12,5
unifera	

CC: Cecilia Moore Region 5 TPO Mail Code: SM-53 MWEGP Voes & Svoes

LABORATORY: PDP ANALYTICAL SRVs.

SDG: EDCF6 CASE: 27986

SITE: HIMCO LANDFILL

Page of

This review covers eighteen (18) low concentration water samples, numbered EDCF6 - EDCF9, EDCG1, EDCG3, EDPM3, EDPM6 - EDPM8, and EDPN0 - EDPN7, were collected on 04/25/2000. The PDP Analytical Services, of Woodland, TX received the samples on 04/27/2000, in good condition. The samples were analyzed for low concentration VOAs and SVOAs. Samples EDPM8 and EDCG1 are identified as Trip Blanks and were analyzed for VOA. All samples were analyzed per CLP SOW OLCO2.1.

Laboratory Control Samples (LCS) Identified as VLCS94, VLCS 5 and VLCS97 (VOA) and SLCS69 (SVOA) were analyzed in place of matrix spike/matrix spike duplicate (MS/MSD) samples.

Samples EDPM8 and EDCG1 were identified as Trip Blanks and sample.

The VOA samples were analyzed within the holding time of fourteen (14) days for preserved water samples and the SVOA samples were extracted within the required holding time of seven days. The analysis of the semivolatile extracts were performed within forty (40) days. Therefore, the results for the VOA and SVOA fractions are acceptable.

The reviewer's narrative and data qualifiers are noted in the following pages.

Reviewed by: W. Ira Wilson Lockheed Martin/ESAT

S. C. S.

Date: June 16 , 2000

LABORATORY: PDP ANALYTICAL SRVs.

Page 3 of 8

Capallet

SDG: EDCF6

CASE: 27986

SITE: HIMCO LANDFILL

Below is a summary of the out-of-control audits and the possible effect on the data for this case.

#### 1. HOLDING TIME

This review covers eighteen (18) low concentration water samples, numbered EDCF6 - EDCF9, EDCG1, EDCG3, EDPM3, EDPM6 - EDPM8 and EDPN0 - EDPN7, were collected on 04/25/2000. The PDP Analytical Services, of Woodland, TX received the samples on 04/27/2000 in good condition. The samples were analyzed for low concentration VOAs and SVOAs. Samples EDPM8 and EDCG1 are identified as "rip Blanks and were analyzed for VOA only. All samples were analyzed per CLP SOW OLC02.1.

The VOA samples were analyzed within the holding time of fourteen (14) days for preserved water samples; therefore, the results are acceptable.

The SVOA samples were extracted within the holding time of seven (7) days. The extracts were promptly analyzed within the required 40 days criteria. Therefore; the results are acceptable.

#### 2. GC/MS TUNING AND GC PERFORMANCE

GC/MS tuning complied with the mass list and ion abundance criteria for BFB and DFTPP.

#### 3. CALIBRATION

Initial and continuing calibration standards of VOA and SVOA were evaluated for the Target Compounds List (TCL) and outliers were recorded on the outlier forms included as a part of this narrative.

#### 4. METHOD BLANK

Blanks VBLK95 and VBLK97 are the low concentration water Volatile Method Blanks. The Method Blanks were clean, no TCLs or TICs reported. Blank VHBLK01 is identified as a Holding Blank sample

Reviewed by: W. Ira Wilson Lockheed Martin/ESAT

Date: \_\_June 16 , 2000

LABORATORY: PDP ANALYTICAL SRVs.

Page of

SDG: EDCF6

CASE: 27986

SITE: HIMCO LANDFILL

which was also clean.

Blank SBLK37 is the low conc. water Semivolatile Method Blank. Blank SBLK37 reported no TCLs and no TICs.

Please refer to Form-IV LCV and Form-IV LCSV for a list of associated samples.

#### 5. SURROGATE RECOVERY AND SYSTEM MONITORING COMPOUNDS

The low concentration recovery of the system monitoring spikin. Compound (BFB = Bromofluorobenzene) for the volatile analysis and the surrogate compounds for the semivolatile analysis met the required QC limits for all samples; therefore, all results are acceptable.

#### 6. MATRIX SPIKE/MSD SAMPLES

A Laboratory Control (LCS) Samples identified as VLCS94, VLCS95 and VLCS97 (for volatiles) and SLCS69 (for semivolatiles) were used in place of a matrix spike/matrix spike duplicate sample for the low concentration analysis. All spike recoveries were within the QC limits; therefore, the results are acceptable.

#### 7. FIELD BLANK AND FIELD DUPLICATE

Samples EDPM8 and EDCG1 were identified as Trip Blanks and analyzed for volatiles only. The sample EDPM8 reported a detectable amount of Methylene Chloride  $(0.6\mu g/L)$  and no TICs. Volatile sample EDCG1 reported a detectable amount of Methylene Chloride  $(3\mu g/L)$  and Acetone  $(4\mu g/L)$ , and no TICs.

#### 8. INTERNAL STANDARDS

The internal standard retention times and area counts for the low concentration volatile and semivolatile samples were within the required QC limits; therefore, the results are acceptable.

Reviewed by: W. Ira Wilson Lockheed Martin/ESAT

Date: June 16 , 2000

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LABORATORY: PDP ANALYTICAL SRVs.

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1. Land

SDG: EDCF6

CASE: 27986

SITE: HIMCO LANDFILL

#### 9. COMPOUND IDENTIFICATION

Target compounds and TICs were correctly identified by "best fit" library search method.

#### 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

VOA and SVOA Target Compounds (TCLs) and Tentative Identified Compounds (TICs) were properly quantitated; therefore, the results are acceptable.

#### 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

GC baseline for pest/PCB analysis indicated acceptable performance.

#### 12. ADDITIONAL INFORMATION

None.

Reviewed by: W. Ira Wilson\_Lockheed Martin/ESAT

Date: June 16 , 2000

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Reviewer's Init. Date 1/15/00

<sup>\*\* =</sup> These flags should be applied to the analytes on the sample data sheets

## TCL COMPOUNDS LABORATORY: PDP ANACytical SITE NAME: \_ HIMLED CALIBRATION OUTLIER LOW CONCENTRATION WATER SEMIVOLATILE TCL COMPOUNDS (Page 1 of 2)

Instrument# HP 5973			al Cal.			ntin. Ca			ntin. Ca		Contin. Cal.			Contin. Cal.		
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N-nitroso-di-n-propylamine	0.50		1		L		1	L	L	1_1		Ĺ			L	
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2,4-Dimethylphenol	0.20			L	1	1	1		l			<u> </u>	1. 1			1
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2,4-Dinitrotoluene Affected samples:

2,4,5-Trichlorophenol

2-Chloronaphthalene

2-Nitroaniline

Dimethyl phthlate

2,6-Dinitrotoluene

2,4-Dinitrophenol

Acenaphthylene

3-Nitroaniline

Acenaphthene

4-Nitrophenol

Dibenzofuran

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10.80

0.01

0.01

1.30

0.20!

0.01

0.30

0.80

10.20!

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0.010,233

CASEISAS#: 2 7986

11.147 140,7 5

0,292 25,2 5

Reviewer's Init/Date: 25 kg

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

0,107

6,2641

<sup>• =</sup> These flags should be applied to the analytes on the sample data sheets.

# CALIBRATION OUTLIER LOW CONCENTRATION WATER SEMIVOLATILE TCL COMPOUNDS (Page 2 of 2)

P<u>z 8 of 8</u>

|--|

Instrument# HP5973			al Cal.			ntin. Cal		C	ontin. Ca	1.	Co	ontin. Ca	al.	l C	ontin. Ca	11.
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Diethylphthalate	[0.01]					Ī	L	Ĺ	1	1_		İ	1	1	L	L
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Fluorene	[0.90]		L			1	1	L	1			L	L	<u> </u>	1	I
4-Nitroaniline	0.01		1			1	1	<u> </u>	1			1	1	1	1	1
4,6-Dinitro-2-methylphenol	0.01		<u> </u>			1		<u></u>				<u> </u>	1	11	1	1
N-nitrosodiphenylamine	0.01					1	1	L	1			L	1	1	1	1
3romophenyl-phenylether	0.10					1	1		1				L	1	<u> </u>	Ī
Exachlorobenzene	0.10			L]		1		L	1	L		Ī	1	1		1
Pentachlorophenol	0.05					1							1	1		
Phenanthrene	[0.70]						1		1			1	1	1	1	
Anthracene	0.70					Ī	I I		Ī	ĹĹ		1		1		Ī
Di-n-butylphthalate	0.01					1			1			L	i	1		<u> </u>
Fluoranthene	0.60					Ī			L				1			L
Pyrene	0.60								1					1		
Butylbenzylphthalate	[0.01]								1				1	L	L	
3'-Dichlorobenzidine	0.01			]		1			1	1_1		<u> </u>	1	1		
يوnzo(a)anthracene	0.80								<u></u>			<u> </u>	<u> </u>		L	$\overline{oxedsymbol{oxed}}$
Chrysene	0.70						LJ		1			L	1			
bis(2-Ethylhexyl)phthalate	0.01								1	1_1			1	1	L	
Di-n-octyl phthalate	0.01			Ī		Ī			1				1			L
Benzo(b)fluoranthene	0.70												1			
Benzo(k)fluoranthene	0.70					}			1				1	<u> </u>	L	1
Benzo(a)pyrene	0.70								<u>i                                     </u>					L	1	
Indeno(1,2,3-cd)pyrene	0.50					Ī			1					<u> </u>	l	
benz(a,h)anthrancene	0.40					Ī			İ			L	Ī	L	L	
_inzo(g,h,i)perylene	0.50					Ī			1				Ī.	1		
						1			1				1	<u> </u>		<u> </u>
Nitrobenzene-d5	0.01			L		1		l	1			1	1			二
2-Fluorobiphenyl	0.70								1				1	<u> </u>		
Terphenyl-d14	0.50					1			1	1_1			1	<u> </u>		$\overline{\Box}$
Phenol-d5	0.80					1			1				1	L		
2-Fluorophenol	0.60					1							1	L		
2,4,6-Tribromophenol	0.01					I	1		Ī			1				

Reviewer's Init/Date: W. L.

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

• = These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

ESAT-5-022.3 1/95

#### ORGANIC DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature used in this document, the following code letters and associated definitions are provided:

**VALUE** - when/if the result of a value is greater than or equal to the Contract Required Quantitation Limit (CRQL).

- U Indicates that the compound was analyzed for, but not detected. The sample quantitation limit corrected for dilution and percent moisture is reported.
- Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound where the result is less than the sample quantitation limit, but greater than zero. The flag is also used to indicate a reported result having an associated QC problem.
- R Indicates the data are unusable. (NOTE: The analyte may or may not be present.)
- N Indicates presumptive evidence of a compound. This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search.
- P Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns. The lower of the two results is reported.
- C Indicates pesticide results that have been confirmed by GC/MS.
- B Indicates the analyte is detected in the associated blank as well as in the sample.
- E Indicates compounds whose concentrations exceed the calibration range of the instrument.
- D Indicates an identified compound in an analysis has been diluted. This flag alerts the data user to any differences between the concentrations reported in the two analysis.
- A Indicates tentatively identified compounds that are suspected to be aldol condensation products.
- G Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method.
- L Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method.
- T Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample.
- X,Y,Z are reserved for laboratory defined flags.

<b>Ş</b> ЕІ	PA	Unite	d States Con	Environ tract Lab	mental Protect oratory Progra	m	(Fo	ain of Cus or Organic Cl	P Analysis)	ord	~ No.	Case No.	;	4
						ion No Sar	npling Co.	4-1-14	5. Date Shipp	ed Carrier		7. Date Rece 4 - 2 7-6	vedReceiv	ed by:
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ribution Blue - Region Copy Pink - SMO Copy White - Lab Copy for Return to SMO Yellow - Lab Copy for Return to Region

Soe Reverse for Additional Standard Instructions

\*\*See Reverse for Purpose Code Definitions

9=	PA	Unite			nental Protectoratory Progra	m	& Cha (Fo	i <b>in of Cus</b> r Organic Cl	fic Report tody Reco P Analysis)	ord	SDG No.		///	
					3. Rec	ion No. Sam	pling Co.	1 who	i Date Shippe	ed Carrier	<b>*</b>	7. Date Recei	vedReceiv	red by: Nor Più
Surface	AT IN	1	i ik			er (Name) er Signature		1	Airbill Number	11 118 14	ンイブ	Laboratory Co	ntract No.	Unit Price
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See Reverse for Additional Standard Instructions
\*\*See Reverse for Purpose Code Definitions

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EPA For. 10-2 (2/99)

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'ribution Blue : Regian Copy White - Lab Copy for Return to SMO Yellow - Lab Copy for Return to Region

SDG EDCFG

See Reverse for Additional Standard Instructions

\*\*See Reverse for Purpose Code Definitions

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5. Soil/Sedir 6. PE-water 7. PE-soil 8. Other (spe			6. CH3 7. Oth	or (apecil Column D	4 Purpo	F RP	TIDA AC	ng Term tion TRIFS TRD RA			acc, x, y	Received by:	ner IP	rice
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Shipment for C Complete? (Y/		Pag of	[	BNA MS/N	ISD Required? ISD Required? MS/MSD Required	Y/N <sup>1</sup> San Y/N <sup>1</sup> San	nple #:			Additional Sampler Signature	gnatures	Chain of Custody S	eal Number(:	s)
PR provides 7-			und in ad	dition to	preliminary res			Chain of C	ustody	Record		L		
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	Region Co-	Return	to SMO	Pink - SMC Yellow - La	Copy b Copy for Return		4		EPA Fc	10-2 (2/99)	1	See Reverse fo	r Additional S	Standard Instructions

See Reverse for Additional Standard Institutions
\*\*See Reverse for Purpose Code Defin'

OEI	DΛ	Unite	d States	Environn	nental Protectio	n Agency	Org.	anic Traffi n of Cust	c Report	·d	SDG No	Case No		
YLI	-	1	Contr	act Labo	oratory Program		(For	Organic CLF	P Analysis)			,		
1. Matrix Enterin		2	Preserv Control	M/A	3 Regio	n No Samp	oling Co.	, , , , , , , , , 5	Date Shipped	Carrier , , , , x		7. Date Receive	Carl	nTen
(Enter in Column A)  1. Surface W	Aler		SUPERO 1. HGI		Sampler	(Name)	· · · · · · · · · · · · · · · · · · ·	Ai	rbill Number	1 1 1 1 4 1 1	,	Laboratory Contr	act No U	nit Price
2. Ground W 3. Leachale			3. Nah	SO4	Sampler S	Signature	ter er		Ship To	31 /1/20 (1/7)	cel in	8. Transfer to:		ate Received
4. Field QC 5. Soil/Sedin 6. PE-water	ni 1		4. H2S 5. ICe 6. CH3	Mly IOH	4 Purpo	se** / Ear	ly Action	ng Term	74.0	in a kefti.		Received by:		
7. PE-soil 8. Other (spe Column A	icify in		7. Other	or ( <b>Spe</b> cil Column C Preserve		1	PA AC REM RI SI ESI	RIFS RD RA O&M	<i>;</i> · ·	The section of		Contract Number	er P	rice
CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other	B Conc Low Med	C Sample Type Comp / Cab	vative (from		E AS Analysis TA (circle one)	TA (cucle one)	Regiona Tracking or Tag N	Specific	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Sample Condition
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Shipment for C		Pa		VOA MS/I	MSD Required?	Y/N Sar	mple #:	<del></del>		Additional Sampler Sig	nalures .	Chain of Custody Se	al Number	(5)
Complete? (Y	(N);	j_ 0	<b>)</b>		MSD Required?	Y/N Sai					( .		-	
PR provides 7-	day dala esults wil	lurnaro Lincrea	ound in ac	dition lo	MS/MSD Require preliminary res	d? Y/N.' Sai ults. Reque	mple # sts	Chain of	Custody	LRecord				
Reinquished b					ale / Time	Received t	oy: (Signatur			ned by. (Signature)	Date / Tim	e Received by.	(Signature	9)
Relinquished b	iy: (Signa	iture)		<del></del> -	Pate / Time	Received I	by (Signatur	re)	Relinquis	hed by (Signature)	Date / Tim	e Received by	(Signature	9)
Relinquished b	oy (Signa	ature)			Pale / Time	Received (Signature	for Laborator	y by: Fiir	1	/ Time Remarks	s: Is custody seal intact	50	G; E	7486 DCF6
Distribution Blue White	Region Co Lab Copy	oy for Retur	rn to SMO	Pink - SM Yellow - L	O Copy ab Copy for Return							See Reverse for	Additional	Standard Instruction Code Definitions

EPA Form 9110-2 (

LE	PA	United	d States Cont	Environr ract Labo	mental Pro oratory Pr	otection A - ncy rogram	& Cha	in of	mic Report tody Reco LP Analysis)		SDG No	Case No		
1. Matrix (Enter in Column A)	a miles	2,	Present	olive:	3				5. Date Shippe	Carrier /	( )	7 Date Rec 4-27	eived-Receive	lor Fiir
1. Surface V	Valer	1	I. HCI	7.7	30 LC	mpler (Name)		٠,	Airbill Number	0124806	742	Laboratory C	Contract No. 10	nit Price 525 × 00
<ol> <li>Ground W</li> <li>Leachale</li> <li>Field QC</li> </ol>			2. HNO 3. Nat 4. H25	)3 ISO4	- Sa	impler Signature	1 3	-	6 Ship To:	a dimeribe	al civic	8 Transfer		ale Received
5. Soil/Sedir 6. PE-water 7. PE-soil			5. Ice ( 6. CH3	only	4		Early Action	ong Term iction	(i)	A Amely he was from	; Carle	Received by		
8. Other (spe Column A			in C	Column D Preserve		PRP ST FED BZ	REM RI SI ESI	RIFS X RD RA O&M	11	$\int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt = \int_{0}^{\infty} (t - L) dt$	13, 100	Contract Nu	mber P	rice
CLP Sample Numbers (from labels)	A Matrix (from Box 1)	B Conc Low Med		vative	TA (circle on: PR <sup>a</sup> 7 1: VOA	E RAS Analys TA e) (circle one) 4 21 PR* 7 14 BNA	TA (circle one)	Tracki or Tac	F nal Specific ng Number g Numbers	G Station Localion Identifier	H Mo/Day/ Year/Time Sample Collection	Corresponding CLP Inorganio Sample No		K Sample Condition
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Shipment for C Complete? (Y <b>(</b>		Pag of		BNA MS/M	ISD Requi ISD Requi MS/MSD R		ample #: ample #:			Additional Sampler Sig		Chain of Custody	Seal Number(	5)
*PR provides 7-e for preliminary re	day data to esults will	irnarou ncreas	ind in ad	dition to	prelimina	ry results. Requ	ests	Chain c	of Custody	Record				
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Relinquished by	y: (Signal	ure)		Da	_L ale / Time 	Received (Signatu	I for Laboratory	y by:	Date V-27 ro	/ Time Remark	s: Is custody seal intac		se : 27	
Distribution Blue -	Region Conv			Pink - SMC	Conu		~~~ <i>c</i>	1 run	<b>-</b>	1120				Standard Instructio

White - Lab Copy for Return to SMO Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructio

\*\*See Reverse for Purpose Code Definitions
CLASS-99

<b>SEF</b>	PA	United	d States i Contr	Environn ract Labo	nental Protectio Tratory Program	n Agency	& Chai	anic Traffic in of Custod Organic CLP A	y Recor		SDG No	Case No		
Matrix (Enter in Column A)	12	2.	Preserv (Enler M	allva	§r 3 Regio	n No Samp		5 D;	ate Shipped	Carrier	,	7. Date Receive	d-Received	or Frie
Column A)	中等来	13.2	Column b		Sampler	(Name)			Number			Laboratory Cont	ract No Uni	ا Price
1. Surface W			1. HCi		1/1	٠ , .			;	1 1150	`	68-D7-0	004 5	1 Price 25 25 200
2. Ground Wa 3. Leachále 4. Field QC	âler		2. HNC 3. NaH 4. H2S	1504	Sampler	Signature /	111	6 SI	nip To	· il ut ilitiz	1 11 11 11 1	8 Transfer to:	Dat	e Received
5. Soil/Sedim 6. PE-water 7. PE-soil			5. Ice 6. CH3	only BOH	4 Purpo	se Earl	y Action	ng Term	, , , , , , , , , , , , , , , , , , ,		Andrew 10	Received by		
8. Other (spe Column A)			in C	er (specifi Column D Preserved		·	REM C	RIFS 1 RD RA	. (	$\frac{f + f \cdot f}{(1 + f \cdot f)} = \frac{f \cdot f \cdot f}{(1 + f \cdot f)} = \frac{f \cdot f}{G}$		Contract Number	er Pro	
Numbers (from labels)	(from Box 1) Other		C Sample Type Comp / Grab	valive	TA (circle one) PR* 7 (14, 21 P	E AS Analysis TA (circle one) R* 7 14 21	TA (circle one) PR* 7 14 21 Pest/ PCB	F Regional Sp Tracking Nu or Tag Num	ecific imber	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	Corresponding CLP Inorganic Sample No	J Sampler Initials	K Sample Condition
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Shipment for Ca		Pag	e \		ISD Required?	Y/N San	·			Additional Sampler Sig	gnalures	Chain of Custody Se	al Number(s	)
Jomblefe₃ (XV)	1) .	/ of	<b>—</b>		ISD Required?	Y/N San					g - 1 +			4
PR provides 7-d	lay data ti sults will i	urnarou	and in ad	dition to	MS/MSD Required preliminary resi			Chain of C	ustody	Record	<del></del>			
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Stribution Blue 1 White	Region Copy Lab Copy fi	/ or Return	i lo SMO	Pink - SM0 Yellow - La	O Copy Bb Copy for Return (					m 9110-2 (?		See Reverse for	or Purpose (	tandard Instruction Code Definitions CLASS 99 0

# PDP ANALYTICAL SERVICES

1680 Lake Front Circle, Suite B • The Woodlands, TX 77380 • Phone (281)363-2233

Contract No. 68-D7-0004	Case No. 27986	SDG No. EDCF6

# SDG NARRATIVE

MAY 1 9 2000

### SAMPLE RECEIPT:

**04/27/00** @ **09:38 A.M.** - Received three shipments consisting of three coolers:Cooler 1 temperature : 4°C. Cooler 2 temperature : 4°C. CoC391570, COC391567, COC391571, COC391575, COC391569, COC391535)contained the following:

EDPM3 - 2-1L amber, 3-40mL Voa Vials.

EDPM6 - 2-1L amber, 3-40mL Voa Vials.

EDPM7 - 2-1L amber, 3-40mL Voa Vials.

EDPM8 - 2-40mL Voa Vials.

EDPN5 - 2-1L amber, 3-40mL Voa Vials.

EDPN6 - 2-1L amber, 3-40mL Voa Vials.

EDPN7 - 2-1L amber, 3-40mL Voa Vials.

EDCF6 - 2-1L amber, 3-40mL Voa Vials.

EDCF7 - 2-1L amber, 3-40mL Voa Vials.

EDCF8 - 2-1L amber, 3-40mL Voa Vials.

EDCG1 - 2-40mL Voa Vials.

EDCF9 - 2-1L amber, 3-40mL Voa Vials.

EDPN1 - 2-1L amber, 3-40mL Voa Vials.

EDPN2 - 2-1L amber, 3-40mL Voa Vials.

EDPN3 - 2-40mL Voa Vials.

EDPN4 - 2-1L amber, 3-40mL Voa Vials.

EDPN0 - 2-1L amber, 3-40mL Voa Vials.

EDCG3 - 2-1L amber, 3-40mL Voa Vials.

No other problems were encountered during sample receipt.

### **VOLATILES:**

All samples were analyzed on a HP 5973 GC/MS using a 60 meters long DB-624 column having a 0.53mm ID and 3um film thickness. The trap used was a OV-1/Tenax/Silica Gel (Tekmar #6. Cat 14-1755-003). A 20 mL purge volume was used for all samples, blanks and standards. The concentrations of the standards and spikes were maintained at the levels required by the Statement of Work (SOW).

The following field samples are analyzed for volatiles in this SDG. The pH of the samples is listed against them.

EDPM3	2.0	EDPN7	2.0
EDPM8	5.0	EDCF6	2.0
EDPM6	2.0	EDCF7	2.0
EDCG1	2.0	EDCF8	2.0
EDPM7	2.0 .	EDCF9	2.0

### 21CA

# LOW CONC. WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

	EPA	BFB	OTHER	TOT:
	SAMPLE NO.	555 !%REC #	•	!OUT!
	SAMPLE NO.	1 2000 #	1	1001
0.7	!	1 101		
	VBLK94	101	<u> </u>	; 0;
	VLCS94	100	<u> </u>	0
	EDPM3	99	<u>!</u>	0
	EDPM8	98		0 [
	EDPM6	103		0
	EDCG1	104		0;
	EDPM7	104		0
	EDPN3	104		0
	EDPN5	106	ˈi	0;
10	EDCG3	103	 	0¦
11	EDPN6	104	·	0{
12	VIBLK01	104		0¦
13	EDPN7	105		0¦
14	VBLK95	99		0¦
15	VLCS95	97 ¦	1	0;
16	EDCF6	101		0¦
17	VIBLK03	100		0
18	EDCF7	100		0
19	VIBLK04	100		0
20	EDCF8	101		0
21	VIBLK05	101		0
22 İ	EDCF9	101	i	0
23	VIBLK06	102	i	0
:	EDPN1	102	i	o i
:	EDPN2	101	j	0
26	EDPN4	102		0
27 İ	EDPN0	102	<del></del> į	0
28	VBLK97	108	į	οį
29 İ	VLCS97	106	j	0
30	VHBLK01	110	i	0

QC LIMITS %REC
BFB = Bromofluorobenzene (80-120)

<sup>#</sup> Column to be used to flag recovery values

<sup>\*</sup> Values outside of contract required QC limits

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE LAB CONTROL SAMPLE RECOVERY

4

VLCS94

Date Analyzed: 04/27/00

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: GVLCS058 LCS Lot No.: 60

Purge Volume: 20.0 (mL) Dilution Factor: 1.0

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

LCS Aliquot: 10.0 (uL)

Lab File ID: G0892

COMPOUND	AMOUNT ADDED (ng)	AMOUNT RECOVERED (ng)	%REC #	QC LIMITS
	======	========	======	======
Vinyl chloride	100	72	72	60-140
1,2-Dichloroethane	100	97	97	60-140
Carbon tetrachloride	100	89	89	60-140
1,2-Dichloropropane	100	91	91	60-140
Trichloroethene	100	89	89	60-140
1,1,2-Trichloroethane	100	89	89	60-140
Benzene	100	93	93	60-140
cis-1,3-Dichloropropene	100	90	90	60-140
Bromoform	100	87	87	60-140
Tetrachloroethene	100	82	82	60-140
1,2-Dibromoethane	100	83	83	60-140
1,4-Dichlorobenzene	100	78	78	60-140
		 	:	

LCS Recovery: 0 outside limits out of 12 total.

COMMENTS:	

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

<sup>\*</sup> Values outside of QC limits.

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE LAB CONTROL SAMPLE RECOVERY

VLCS95

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: GVLCS059

LCS Lot No.: 60

Lab File ID: G0909

Date Analyzed: 04/28/00

Purge Volume: 20.0 (mL)

Dilution Factor: 1.0

LCS Aliquot: 10.0 (uL)

COMPOUND	AMOUNT ADDED (ng)	AMOUNT RECOVERED (ng)	   %REC #	QC LIMITS
[	======	=====================================	====== 	i =====
Vinyl chloride	100	72	72	60-140
1,2-Dichloroethane	; 100	; 84	84	60-140
Carbon tetrachloride	100	87	87	60-140
1,2-Dichloropropane	100	85	85	60-14j
Trichloroethene	100	87	87	60-140
1,1,2-Trichloroethane	100	81	81	60-140
Benzene	100	91	91	60-140
cis-1,3-Dichloropropene	100	82	82	60-140
Bromoform	100	72	72	60-140 ¦
Tetrachloroethene	100	84	84	60-140
1,2-Dibromoethane	100	74	74	60-140
1,4-Dichlorobenzene	100	69	69	60-140
1				

LCS Recovery: 0 outside limits out of 12 total.

COMMENTS:	

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

<sup>\*</sup> Values outside of QC limits.

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE LAB CONTROL SAMPLE RECOVERY

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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

VLCS97

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: GVLCS061

LCS Lot No.: 60

Lab File ID: G0942

Date Analyzed: 05/02/00

Purge Volume: 20.0 (mL)

Dilution Factor: 1.0

LCS Aliquot: 10.0 (uL)

COMPOUND	AMOUNT ADDED (ng)	AMOUNT RECOVERED (ng)	     %REC #	QC LIMITS
Vinyl chloride	100	!========= ! 80	; ===== ! 80	; ===== :60-140
1,2-Dichloroethane	100	97	97	60-140
Carbon tetrachloride	100	86	86	60-140
1,2-Dichloropropane	100	87	87	60-140
Trichloroethene	100	88	88	60-140
1,1,2-Trichloroethane	100	85	85	60-140
Benzene	100	94	94	60-140
cis-1,3-Dichloropropene	100	82	82	60-140
Bromoform	100	71	71	60-140
Tetrachloroethene	100	84	84	60-140
1,2-Dibromoethane	100	74	74	60-140
1,4-Dichlorobenzene	100	69	69	60-140
	1	1 1		! !

LCS Recovery: 0 outside limits out of 12 total.

COMMENTS:	· 

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

<sup>\*</sup> Values outside of QC limits.

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE METHOD BLANK SUMMARY

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

VBLK94

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Date Analyzed: 04/27/00

Lab Sample ID: GVBLK058

Time Analyzed: 1819

Lab File ID: G0891 Instrument ID: G-HP5973

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
0.1	=====================================	====================================		1005
01	. — +	GVLCS058	G0892	1907
02		6033.002	G0893	1954
03		6033.005	G0894	2042
04		6033.003	G0895	2129
05		6033.012	G0896	2216
06	· ·	6033.004	G0897	2303
07	EDPN3	6033.016	G0898	2351
08		6033.006	G0899	0038
09		6033.019	G0900	0124
10	EDPN6	6033.007	G0901	0211
11	VIBLK01	VIBLK01	G0902	0258
12	EDPN7	6033.008	G0903	0345
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COMMENTS:		 	 	 	

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE METHOD BLANK SUMMARY

VBLK95

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCF6

Lab Sample ID: GVBLK059

Date Analyzed: 04/28/00

Lab File ID: G0908

Time Analyzed: 0657

Instrument ID: G-HP5973

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

### THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

	EPA	LAB	l LAB	TIME
	SAMPLE NO.	! SAMPLE ID	FILE ID	ANALYZED
	=========	=======================================	=========	=========
0.1	VLCS95	GVLCS059	G0909	0744
02	EDCF6	6073. 19	G 910	0831
03	1	VIBTK03	G0911	0917
04		6033.010	G0912	1004
	VIBLK04	VIBLK04	G0913	1051
06	EDCF8	6033.011	G0914	1138
07		VIBLK05	G0915	1225
08		6033.013	G0916	1312
09		VIBLK06	G0917	1359
10		6033.014	G0918	1447
11	EDPN2	6033.015	G0919	1534
12	EDPN4	6033.017	G0920	1621
13	EDPN0	6033.018	G0921	1708
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COMMENTS:			

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE METHOD BLANK SUMMARY

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: GVBLK061

Date Analyzed: 05/02/00

Lab File ID: G0941 Time Analyzed: 0028

Instrument ID: G-HP5973

### THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

	EPA	LAB	LAB	TIME
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
	SAMPLE NO.	SAMPLE ID	=====================================	ANADIZED
01	VLCS97	GVLCS061	G0942	0114
02		6033.001	G0942 G0944	0248
03	AHBTVOI	0033.001	100944	0240
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06			[	
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08			<u> </u>	
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11		<del></del>	[	
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COMMENTS:				
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

. 4

VBLK95

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: GVBLK059 Date Received:

Lab File ID: G0908 Date Analyzed: 04/28/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
	Bromomethane	1	U
	Vinyl chloride	• :	i บ
	Chloroethane	1	U
	Methylene chloride	2	ប
67-64-1		5	U
75-15-0	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
	cis-1,2-Dichloroethene	-	U
	trans-1,2-Dichloroethene	1	U
	Chloroform		U
107-06-2	1,2-Dichloroethane	1	U
	2-Butanone	5	U
	Bromochloromethane	1	U
	1,1,1-Trichloroethane	1	U
	Carbon tetrachloride	1	U
	Bromodichloromethane	1	U
	1,2-Dichloropropane	1	U
	cis-1,3-Dichloropropene	• •	Ū
	Trichloroethene	1	Ū
	Dibromochloromethane	1	Ū
	1,1,2-Trichloroethane		Ū
	Benzene		U
	trans-1,3-Dichloropropene	- :	Ū
75-25-2		1	Ū
	4-Methyl-2-pentanone	· :	Ū
	2-Hexanone	· i	บ
	Tetrachloroethene	- :	U
	1,1,2,2-Tetrachloroethane	- :	Ū
	1,2-Dibromoethane	i	_
108-88-3		1	•
	Chlorobenzene	1	_
	Ethylbenzene	1	_
100-42-5		1	_
	Xylenes (total)	1	_
	1,3-Dichlorobenzene	1	-
	1,4-Dichlorobenzene	1 1	_
	1,2-Dichlorobenzene	1 11	-
23-30-1		,	Ų
96-12-9	1,2-Dibromo-3-chloropropane	1	ΤT

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

VBLK95

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: GVBLK059

Date Received: \_\_\_\_

Lab File ID: G0908

Date Analyzed: 04/28/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q =====
1		_		
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12.		_		
13		_		
15		_		
17				
18		_		
20.		_		
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK97

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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: GVBLK061 Date Received:

Lab File ID: G0941 Date Analyzed: 05/02/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3 74-83-9 75-01-4 75-09-2 67-64-1 75-15-0 75-35-4 156-59-2 156-60-5 67-66-3 107-06-2 78-93-3 74-97-5 75-27-4 78-87-5 10061-01-5 79-01-6 124-48-1 79-00-5 124-48-1 79-00-5 108-10-1 591-78-6 127-18-4 79-34-5 108-88-3 108-90-7	ChloromethaneBromomethaneVinyl chlorideChloroethaneMethylene chlorideAcetoneCarbon disulfide1,1-Dichloroethanecis-1,2-Dichloroethenecis-1,2-DichloroetheneChloroform1,2-Dichloroethane2-ButanoneBromochloromethane1,1,1-TrichloroethaneCarbon tetrachlorideBromodichloromethane1,2-Dichloropropanecis-1,3-DichloropropeneTrichloroetheneDibromochloromethane1,1,2-TrichloroethaneBenzenetrans-1,3-DichloropropeneBromoform4-Methyl-2-pentanone2-HexanoneTetrachloroethene1,2-DibromoethaneToluene	(ug/L)  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	מממממממממממממממממממטיזטט
100-41-4 100-42-5 1330-20-7 541-73-1 106-46-7 95-50-1 96-12-8	Ethylbenzene		ט ט ט ט ט ט

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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i		

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EPA SAMPLE NO.

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: GVBLK061

Date Received:

Lab File ID: G0941

Date Analyzed: 05/02/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.		=======	=======================================	=====
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25.				i
26.		li	i	i
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

VHBLK01

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCF6

Date Received: 04/27/00

Lab Sample ID: 6033.001

Date Analyzed: 05/02/00

Lab File ID: G0944 Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
	Chloromethane	1	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Metnylene chloride	[ ]	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	1}	U
75-35-4	1,1-Dichloroethene	_	U
	1,1-Dichloroethane	_ <b> </b>	U
156-59-2	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform		U
	1,2-Dichloroethane	1	U
	2-Butanone	5	U
74-97-5	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	1	U [
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U ¦
		1	ប
108-10-1	Bromoform 4-Methyl-2-pentanone	1 5	บ
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	
79-34-5	1,1,2,2-Tetrachloroethane	1	
106-93-4	1,2-Dibromoethane	1	υ i
108-88-3		1	- :
	Chlorobenzene	1	:
100-41-4	Ethylbenzene	1	- :
100-42-5	Styrene	1	:
1330-20-7	Xylenes (total)	1	
	1,3-Dichlorobenzene		
	1,4-Dichlorobenzene	1	
	1,2-Dichlorobenzene	1	
	1,2-Dichiorobenzene	1	
140-04-1	1,2,4-Trichlorobenzene	1	U 1

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

VHBLK01

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.001

Date Received: 04/27/00

Lab File ID: G0944

Date Analyzed: 05/02/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCF6

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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.009 Date Received: 04/27/00

Lab File ID: G0910 Date Analyzed: 04/28/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
	Chloromethane	1	  ប
74-83-9	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
175-00-3	Chl.roe hane		រប ¦
175-09-2	Metnylene chloride	2	រប !
67-64-1	Acetone		U
	Carbon disulfide	1	U ¦
	1,1-Dichloroethene	. •	U ¦
	1,1-Dichloroethane		ן טן
	cis-1,2-Dichloroethene		U ¦
	trans-1,2-Dichloroethene	1	U
	Chloroform		ប
107-06-2	1,2-Dichloroethane	1	U
	2-Butanone	5	U
	Bromochloromethane		U
71-55-6	1,1,1-Trichloroethane		U
	Carbon tetrachloride	•	U
	Bromodichloromethane		U
	1,2-Dichloropropane	2	. <del></del> .
	cis-1,3-Dichloropropene		U
	Trichloroethene	0.5	J
	Dibromochloromethane	: - :	U
	1,1,2-Trichloroethane		U
71-43-2		1	
	trans-1,3-Dichloropropene	1	
	Bromoform_	-	U
	4-Methyl-2-pentanone		U
	2-Hexanone	_	U
	Tetrachloroethene	] 1	
	1,1,2,2-Tetrachloroethane	1	
	1,2-Dibromoethane	1	
	Toluene	1	:
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	- :
100-42-5		1	•
	Xylenes (total)	1	
	1,3-Dichlorobenzene	1	
	1,4-Dichlorobenzene	1	U ¦
95-50-1	1,2-Dichlorobenzene	1	U ¦
96-12-8	1,2-Dibromo-3-chloropropane	1	U ¦
	1,2,4-Trichlorobenzene	1	U !
			1

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDCF6	

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.009

Date Received: 04/27/00

Lab File ID: G0910

Date Analyzed: 04/28/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1				
2.				
3.		_ [i		
5		—  ————		
6.				
7.		_		
8.		—   <u> </u>		
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.2		_ ii		
.4.		-		
.5.		j		
.6		_		
.7.		-	i	
9. —		- <u> </u>		
20.		_	———i	
1				
22.		_	i	
4.		-		
25.		_ i		
!6				
27.		_		
9.		-		
0.		- j	i	

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCF7

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.010 Date Received: 04/27/00

Lab File ID: G0912 Date Analyzed: 04/28/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	<del>-</del> ;	Ū
75-01-4	Vinyl chloride	- i	Ū
75-00-3	Chloroethane	~   1	U i
75-09-2	Methylene chloride	2	U
67-64-1	Acetone	<b>[</b> 5]	U
75-15-0	Carbon disulfide	1	U
175-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	1
156-59-2	cis-1,2-Dichloroethene	1	Ū
156-60-5	trans-1,2-Dichloroethene	11	U
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	<b>U</b>
78-93-3	2-Butanone	5	U ¦
74-97-5	Bromochloromethane	11	U
71-55-6	1,1,1-Trichloroethane	1	U ¦
56-23-5	Carbon tetrachloride	1	U ¦
75-27-4	Bromodichloromethane	11	U ¦
78-87-5	1,2-Dichloropropane	1	U ¦
10061-01-5	cis-1,3-Dichloropropene	11	U {
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	1	ן ט
79-00-5	1,1,2-Trichloroethane	1	ן ט
71-43-2		11	ן ט
10061-02-6	trans-1,3-Dichloropropene	11	ט ן
75-25-2	Bromoform	1	U
108-10-1	4-Methyl-2-pentanone	51	ט
	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1)	ן ט
106-93-4	1,2-Dibromoethane	11	U
108-88-3	Toluene	1/1	ן ט
108-90-7	Chlorobenzene	111	J
100-41-4	Ethylbenzene	1	J
100-42-5	Styrene	1	J [
1330-20-7	Xylenes (total)	1	J
541-73-1	1,3-Dichlorobenzene	1 1 1	
	1,4-Dichlorobenzene	111	ן נ
	1,2-Dichlorobenzene	1 1	
	1,2-Dibromo-3-chloropropane	1 1	
	1,2,4-Trichlorobenzene	1 1	
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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EDCF7	
EDCF /	,

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004 -

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.010

Date Received: 04/27/00

Lab File ID: G0912

Date Analyzed: 04/28/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS	NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q =====
1	i				
3.					
5.					
7					
9.					
11.					
13					
15.			<u> </u>		
117					
19.					
21.					
23.					
25. 26.			 		
27					
29. 30.					
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDCF8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.011

Date Received: 04/27/00

Lab File ID: G0914

Date Analyzed: 04/28/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000060-29-7 2. 3. 4. 5. 6. 7. 8. 9.	Ethyl ether	6.91	4	JN
12. 13. 14. 15. 16. 17. 18. 19.				
20. 21. 22. 23. 24. 25. 26.				
28				

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCF8

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.011

Date Received: 04/27/00

Lab File ID: G0914

Date Analyzed: 04/28/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CONCENTRATION

	CAS NO.	COMPOUND	(ug/L)	Q
	74-87-3	Chloromethane	1	U
	74-83-9	Bromomethane	1	U
	75-01-4	Vinyl chloride	1	U
		Chloroethane	1	[t ]
	75-09-2	Methylene chloride	2	U i
	67-64-1	Acetone	5	U
	75-15-0	Carbon disulfide	0.6	J
	75-35-4	1,1-Dichloroethene	1	U
	75-34-3	1,1-Dichloroethane	5	
	156-59-2	cis-1,2-Dichloroethene	1	Ū
		trans-1,2-Dichloroethene	1	U ;
		Chloroform	1	U
	107-06-2	1,2-Dichloroethane	1	U
	78-93-3	2-Butanone	5	U ¦
i		Bromochloromethane	1	U ¦
	71-55-6	1,1,1-Trichloroethane	1	U ¦
	56-23-5	Carbon tetrachloride	1	U
		Bromodichloromethane	1	U !
- 1		1,2-Dichloropropane	1	U
ı	10061-01-5	cis-1,3-Dichloropropene	1	U
i	79-01-6	Trichloroethene	1	U
1	124-48-1	Dibromochloromethane	1	U
;	79-00-5	1,1,2-Trichloroethane	] 1;	U
1	71-43-2	Benzene	1	
ŀ	10061-02-6	trans-1,3-Dichloropropene	1	Ū
1	75-25-2		1	U !
1		4-Methyl-2-pentanone	5	U
1	591-78-6		<b> </b> 5	ן ט
ļ		Tetrachloroethene	1	U
i	79-34-5	1,1,2,2-Tetrachloroethane	1	U
l	106-93-4	1,2-Dibromoethane	1	U ;
1	108-88-3		1	U ¦
-	108-90-7	Chlorobenzene	1	U
-	100-41-4	Ethylbenzene	11	U
1	100-42-5		1	U
1	1330-20-7	Xylenes (total)	11	U ¦
ŀ	541-73-1	1,3-Dichlorobenzene	1	U ¦
l	106-46-7	1,4-Dichlorobenzene	1	U
1		1,2-Dichlorobenzene	1	U
1		1,2-Dibromo-3-chloropropane	1	U
İ		1,2,4-Trichlorobenzene	1	ט ו
į	<del>-</del>	, ,	- i	į

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCF9

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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

CONCENTRATION

Lab Sample ID: 6033.013 Date Received: 04/27/00

Lab File ID: G0916 Date Analyzed: 04/28/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	(ug/L)	Q
<u> </u>			
	Chloromethane	1	U
	Bromomethane	1	U
	Vinyl chloride	1	U
	Chloroethane	2	
	Methylene chloride	2	U
67-64-1		5	U
	Carbon disulfide	1	U
	1,1-Dichloroethene	· - •	ן ט
	1,1-Dichloroethane	0.8	J
	cis-1,2-Dichloroethene	1	U ¦
	trans-1,2-Dichloroethene	1	U ¦
	Chloroform_	1	U
	1,2-Dichloroethane	1	U
	2-Butanone	5	U
74-97-5	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U ¦
	Carbon tetrachloride	1	U ¦
75-27-4	Bromodichloromethane	1	U ¦
78-87-5	1,2-Dichloropropane	1 11	U
	cis-1,3-Dichloropropene	1	U ¦
79-01-6	Trichloroethene	1	U
124-48-1	Dibromochloromethane	1	ט ¦
79-00-5	1,1,2-Trichloroethane	1	U ¦
71-43-2	Benzene	1	U ¦
10061-02-6	trans-1,3-Dichloropropene	1	U
	Bromoform	1	U !
108-10-1	4-Methyl-2-pentanone	5	U
	2-Hexanone	5	U
	Tetrachloroethene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
	1,2-Dibromoethane	1	י ו
108-88-3		1	ט ו
	Chlorobenzene	1	י ד
	Ethylbenzene	1	υİ
100-42-5	<u> </u>	1	υİ
	Xylenes (total)	1	
	1,3-Dichlorobenzene	1	- :
	1,4-Dichlorobenzene	1	:
	1,2-Dichlorobenzene	1	- :
	1,2-Dibromo-3-chloropropane		- :
	1,2,4-Trichlorobenzene	1	
120 02-1	1,2, i liliciilolobelizelle	1	<u> </u>
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDCF9

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.013

Date Received: 04/27/00

Lab File ID: G0916

Date Analyzed: 04/28/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q =====
2. 3. 4. 5.	Ethyl et`ner	6.91	4	JN
7. 8. 9. 10.				
13.  14.  15.  16.				
18. 19. 20. 21.				
23. 24. 25. 26.				
28. 29. 30.				

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

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EDCG1

CONCENTRATION

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.012 Date Received: 04/27/00

Lab File ID: G0896 Date Analyzed: 04/27/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74 07 7	Chloromethano		1 , ,
	Chloromethane		¦ប ¦ប
	Vinyl chloride	:	U
	Chloroethane	· -	U
	Methylene chloride	1 3	
67-64-1		:	J
	Carbon disulfide	i	
	1,1-Dichloroethene		U U
	1,1-Dichloroethane	:	_
		i	U
	cis-1,2-Dichloroethene		U
	trans-1,2-Dichloroethene	i	U
	Chloroform		U
	1,2-Dichloroethane	: -:	U
	2-Butanone		U
	Bromochloromethane		U
	1,1,1-Trichloroethane	: - :	U
	Carbon tetrachloride	1	U
	Bromodichloromethane	1	U
	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	1	U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
75-25-2		1	U
108-10-1	4-Methyl-2-pentanone	5	U
	2-Hexanone	5	Ū
	Tetrachloroethene	1	IJ
	1,1,2,2-Tetrachloroethane	1	_
	1,2-Dibromoethane	1	
108-88-3		1	-
	Chlorobenzene	1	- :
	Ethylbenzene	1 1	
100-41-4		1 1	-
		1 1	-
	Xylenes (total)	: -:	-
	1,3-Dichlorobenzene	11	_
	1,4-Dichlorobenzene	1	_
	1,2-Dichlorobenzene	1	
	1,2-Dibromo-3-chloropropane_	1	-
120-82-1	1,2,4-Trichlorobenzene	1	U

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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EDCCI	1
EDCG1	1
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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.012 Date Received: 04/27/00

Lab File ID: G0896 Date Analyzed: 04/27/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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8		i <del></del> i		i —
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11.		li		ļ
13.				ļ
14.			·	i
15				
16				
17		j		j
18. 19.				ļ
20.				ļ
21.				i ———
22.		i		į ——
23.		!		<del></del>
24				ļ
25				i ——-
26. 27.		i		!
28. — [-		[		[
29.				
30.				
		i		

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCG3

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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.019 Date Received: 04/27/00

Lab File ID: G0900 Date Analyzed: 04/28/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3 74-83-9 75-01-4 75-09-2 67-64-1 75-35-4 75-34-3 156-59-2 156-60-5 107-06-2 78-93-3 71-55-6 75-27-4 78-87-5 10061-01-5 79-01-6 124-48-1 79-00-5 10061-02-6 75-25-2	ChloromethaneBromomethaneVinyl chlorideChloroethaneMethylene chlorideAcetoneCarbon disulfide1,1-Dichloroethenetrans-1,2-Dichloroethenetrans-1,2-DichloroetheneChloroform1,2-Dichloroethane2-ButanoneBromochloromethane1,1,1-TrichloroethaneCarbon tetrachlorideBromodichloromethane1,2-DichloropropaneCis-1,3-DichloropropeneTrichloroetheneDibromochloromethane	(ug/L)	ממממממממממממממממממממ
591-78-6 127-18-4 79-34-5 106-93-4 108-88-3 108-90-7 100-41-4 100-42-5 1330-20-7 541-73-1 106-46-7 95-50-1	2-HexanoneTetrachloroethene1,1,2,2-Tetrachloroethane1,2-DibromoethaneTolueneChlorobenzeneEthylbenzene	5 1 1 1 1 1 1 1 1	מממממממממממ

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCG3

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.019

Date Received: 04/27/00

Lab File ID: G0900

Date Analyzed: 04/28/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

1 !		!	: EST. CONC.	1
CAS NUMBER	COMPOUND NAME	RT	(ug/L)	Q
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4			!	
5		i		j
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11		1	1	
12.	<u></u>	Ì	l	ļ
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDPM3

CONCENTRATION

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6 Lab Sample ID: 6033.002 Date Received: 04/27/00

Lab File ID: G0893 Date Analyzed: 04/27/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	ט ¦
174-83-9	Bromomethane	-   1	
75-01-4	Vinyl chloride	-   1	υİ
175-00-3	Chloroethane	2	į
75-09-2	Methylene chloride	2	U
	Acetone	_   5   ·	U
175-15-0	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	0.8	J
	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1 :	U
	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1 1	U ¦
178-93-3	2-Butanone	5 1	U ¦
74-97-5	Bromochloromethane	1   1   1	U
71-55-6	1,1,1-Trichloroethane	1/1	U
56-23-5	Carbon tetrachloride	1 1	U
75-27-4	Bromodichloromethane	1 1 1	U
78-87-5	1,2-Dichloropropane	0.5	Jİ
10061-01-5	cis-1,3-Dichloropropene	1 1 1	U
	Trichloroethene	1 1	U ¦
124-48-1	Dibromochloromethane	1 1	U
79-00-5	1,1,2-Trichloroethane	1 1 1	ט
71-43-2	Benzene	1	
10061-02-6	trans-1,3-Dichloropropene	1 1	J
75-25-2	Bromoform	110	J
108-10-1	4-Methyl-2-pentanone	5   7	ן ני
591-78-6	2-Hexanone	5 0	J
127-18-4	Tetrachloroethene	1 1	J ¦
179-34-5	1,1,2,2-Tetrachloroethane	1 t	J ¦
106-93-4	1,2-Dibromoethane	110	J
108-88-3	Toluene	1 0	J
108-90-7	Chlorobenzene	1 1	J
100-41-4	Ethylbenzene	1 0	ן נ
100-42-5	Styrene	1 1	J
1330-20-7	Xylenes (total)	1 1 1	ן נ
	1,3-Dichlorobenzene	1 1	J
	1,4-Dichlorobenzene	1 1	J
	1,2-Dichlorobenzene	1 1 1	ן נ
	1,2-Dibromo-3-chloropropane	1 1	ן נ
	1,2,4-Trichlorobenzene	1 1	J i
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDPM3

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.002

Date Received: 04/27/00

Lab File ID: G0893

Date Analyzed: 04/27/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000075-43-4	1	į i		. ~
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

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EDPM6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.003 Date Received: 04/27/00

Lab File ID: G0895 Date Analyzed: 04/27/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	
	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
75-00-3	Chloroethane	1	U
	Methylene chloride	2	U
67-64-1	Acetone	5	U
	Carbon disulfide	0.5	J
75-35-4	1,1-Dichloroethene	1	U
	1,1-Dichloroethane	11	U
156-59-2	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1. 11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	1	U
78-93-3	2-Butanone	1 51	U
74-97-5	Bromochloromethane	1	U
	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	1 1	U
124-48-1	Dibromochloromethane	1 1 1	U .
79-00-5	1,1,2-Trichloroethane	1 1 1	U
71-43-2	Benzene	2	
	trans-1,3-Dichloropropene	1	U
75-25-2	Bromoform	1	U
108-10-1	4-Methyl-2-pentanone	5 1	U
591-78-6	2-Hexanone	5 1	IJ
127-18-4	Tetrachloroethene	1 1 1	IJ
79-34-5	1,1,2,2-Tetrachloroethane	1 11	J
106-93-4	1,2-Dibromoethane	1 111	IJ
	Toluene	1 11	J
108-90-7	Chlorobenzene	1 110	J
100-41-4	Ethylbenzene	1 110	J
100-42-5	Styrene	1 1 1	J
	Xylenes (total)	1 1 1	J
	1,3-Dichlorobenzene	1 1	IJ
	1,4-Dichlorobenzene	110	J i
	1,2-Dichlorobenzene	110	
	1,2-Dibromo-3-chloropropane	110	-
	1,2,4-Trichlorobenzene	1 1 1	-

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDPM6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.003

Date Received: 04/27/00

Lab File ID: G0895

Date Analyzed: 04/27/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000060-29-7 2. 3. 4. 5. 6.	Ethyl ether	6.91		JN
8. 9. 10. 11. 12. 13. 14.				
16. 17. 18. 19. 20. 21.				
23. 24. 25. 26. 27.				
29. 30.				

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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPM7

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.004

Date Received: 04/27/00

Lab File ID: G0897

Date Analyzed: 04/27/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CONCENTRATION

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
	Bromomethane	1	υ i
75-01-4	Vinyl chloride	1	Ū
175-00-3	Chloroethane	1	υį
75-09-2	Methylene chloride	1 21	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	0.6	J
75-35-4	1,1-Dichloroethene	1	U İ
75-34-3	1,1-Dichloroethane	11	U İ
156-59-2	cis-1,2-Dichloroethene	1	U İ
156-60-5	trans-1,2-Dichloroethene	1	υ İ
1 67-66-3	Chloroform	1	U .
	1,2-Dichloroethane	1 1 1	- :
	2-Butanone	5 1	י ט
74-97-5	Bromochloromethane	1 1 1	u i
	1,1,1-Trichloroethane	1	υİ
56-23-5	Carbon tetrachloride	1 11	u i
75-27-4	Bromodichloromethane	110	Ū
78-87-5	1,2-Dichloropropane	110	ו ע
10061-01-5	cis-1,3-Dichloropropene	1 1 1	ו ד
	Trichloroethene	1 110	J İ
	Dibromochloromethane	1 110	j j
	1,1,2-Trichloroethane	1 110	:
71-43-2		1 110	j į
	trans-1,3-Dichloropropene	1 110	J
	Bromoform	110	J
108-10-1	4-Methyl-2-pentanone	5 7	J Ì
_	2-Hexanone	5 1	J j
127-18-4	Tetrachloroethene	1 1 1	J İ
	1,1,2,2-Tetrachloroethane	1/0	ı İ
	1,2-Dibromoethane	1 1 1	J İ
	Toluene	1 1 1	J [
	Chlorobenzene	110	j i
100-41-4	Ethylbenzene	1 1 1	•
100-42-5		ili	j
	Xylenes (total)	110	•
	1,3-Dichlorobenzene	1 1	
	1,4-Dichlorobenzene	110	
	1,2-Dichlorobenzene	1 1 1	
	1,2-Dibromo-3-chloropropane	1 1 1	
	1,2,4-Trichlorobenzene	1 1 1	
1 120-02-1	1,2,4-111cmtotobenzene		, !

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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.004

Date Received: 04/27/00

Lab File ID: G0897 Purge Volume: 20 (mL)

Date Analyzed: 04/27/00 Dilution Factor: 1.0

1	1	ī	l nom covic	i -
CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000060-29-7	Ethyl ether	6.91		JN
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4				
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7		<u> </u>		
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13. 14.		j		
15		i <del></del> ;		
16. 17.		Í ——— [		<del></del>
18		i		
19. 20.				
21.				
22.				
24.				
25. 26.				
27				
28. 29.				
30.				
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

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EDPM8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.005 Date Received: 04/27/00

Lab File ID: G0894 Date Analyzed: 04/27/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	1	
75-01-4	Vinyl chloride	1	
175-00-3	Chloroethane	1	
	Methylene chloride	0.6	J
67-64-1		5	U
75-15-0	Carbon disulfide	1	U
1 75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	บ
	trans-1,2-Dichloroethene	1	
67-66-3	Chloroform	1	Ū į
107-06-2	1,2-Dichloroethane	1	ΰ
78-93-3	2-Butanone	5	Ū Ì
74-97-5	Bromochloromethane	1	- :
71-55-6	1,1,1-Trichloroethane		:
56-23-5	Carbon tetrachloride		Ū İ
75-27-4	Bromodichloromethane	1	-
78-87-5	1,2-Dichloropropane	1	- :
10061-01-5	cis-1,3-Dichloropropene		-
79-01-6	Trichloroethene	1	บ i
124-48-1	Dibromochloromethane	1	υİ
	1,1,2-Trichloroethane	1 1	υĺ
71-43-2		1	Ū İ
	trans-1,3-Dichloropropene	1	
	Bromoform	1/1	U İ
	4-Methyl-2-pentanone	5	υİ
	2-Hexanone	5	
127-18-4	Tetrachloroethene	1	υ i
79-34-5	1,1,2,2-Tetrachloroethane	1 1	Ū
	1,2-Dibromoethane	1	- :
	Toluene	1	- :
	Chlorobenzene	1	- !
100-41-4	Ethylbenzene	1 1	•
100-42-5		1	:
	Xylenes (total)		- !
	1,3-Dichlorobenzene	111	- !
	1,4-Dichlorobenzene	1 1	
	1,2-Dichlorobenzene	1	- !
96-12-8	1,2-Dibromo-3-chloropropane_	•	- :
1 120-82-1	1,2-Dibromo-3-chroropropane_ 1,2,4-Trichlorobenzene	1	- :
1 120-02-1	1,2,4-IIICHIOLODeHZeHe		·

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# 1LCE

EPA SAMPLE NO. -

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDPM8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.005 Date Received: 04/27/00

Lab File ID: G0894 Date Analyzed: 04/27/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

\*

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPN0

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.018

Date Received: 04/27/00

Lab File ID: G0921

Date Analyzed: 04/28/00

CONCENTRATION

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NO.	COMPOUND	(ug/L)	Q
	Chloromethane	1	U
	Bromomethane	11	U
75-01-4	Vinyl chloride	11	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene chloride	4	U
67-64-1	Acetone	43	
	Carbon disulfide	1	Ū
75-35-4	1,1-Dichloroethene	1	U
.75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	15	
107-06-2	1,2-Dichloroethane	1	U
78-93-3	2-Butanone	1 11	
74-97-5	Bromochloromethane	1	Ū
71-55-6	1,1,1-Trichloroethane	1	U
	Carbon tetrachloride	1	U
	Bromodichloromethane	6	
	1, 2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	1	U
124-48-1	Dibromochloromethane	3	}
79-00-5	1,1,2-Trichloroethane	1	U :
71-43-2	Benzene	11	ប
10061-02-6	trans-1,3-Dichloropropene	1	U :
	Bromoform	11	U ¦
108-10-1	4-Methyl-2-pentanone	5	U ¦
591-78-6	2-Hexanone	51	บ
	Tetrachloroethene	1	U ¦
79-34-5	1,1,2,2-Tetrachloroethane	111	U ¦
106-93-4	1,2-Dibromoethane	1 1	U ¦
108-88-3		1 11	U (
108-90-7	Chlorobenzene	1 11	U
100-41-4	Ethylbenzene	1 1 1	ט ו
100-42-5		1 1	י ני
	Xylenes (total)	1 1	u İ
	1,3-Dichlorobenzene	1 1	υİ
	1,4-Dichlorobenzene	1	- :
	1,2-Dichlorobenzene	111	- ;
	1, 2-Dibromo-3-chloropropane	1	- :
	1,2,4-Trichlorobenzene	111	- !

#### 1LCE

EPA SAMPLE NO. ...

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDPNO

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.018

Date Received: 04/27/00

Lab File ID: G0921

Date Analyzed: 04/28/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.000110-82-7	Cyc chexane	13.77	<u>'</u>	.JN
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11CA

EPA SAMPLE NO.

EDPN1

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.014

Date Received: 04/27/00

Lab File ID: G0918

Date Analyzed: 04/28/00

CONCENTRATION

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	1.0	J .
74-83-9	Bromomethane	1 110	τİ
75-01-4	Vinyl chloride	1 1 1	J į
75-00-3	Chloroethane	1 1 1	J İ
	Methylene chloride	2   1	Jί
67-64-1		5   1	
75-15-0	Carbon disulfide	1 1	
75-35-4	1,1-Dichloroethene	1 1 1	J į
75-34-3	1,1-Dichloroethane	1 1 1	ı İ
156-59-2	cis-1,2-Dichloroethene	1 1 1	Γİ
	trans-1,2-Dichloroethene	1 1 1 1	
	Chloroform	1 1 1	rİ
	1,2-Dichloroethane	1 1 1 1	
	2-Butanone	j 5¦u	
74-97-5	Bromochloromethane	1 1 0	·
	1,1,1-Trichloroethane	1   U	1
	Carbon tetrachloride	1 1 1	·j
	Bromodichloromethane	1 1 0	
	1,2-Dichloropropane	1 0	:
	cis-1,3-Dichloropropene	1 1 0	:
79-01-6	Trichloroethene	1   U	į
	Dibromochloromethane		:
	1,1,2-Trichloroethane		:
71-43-2			
	trans-1,3-Dichloropropene		
75-25-2		1 U	
	4-Methyl-2-pentanone	5 U	
	2-Hexanone	5 U	
	Tetrachloroethene	1   U	
	1,1,2,2-Tetrachloroethane	1 U	- 1
	1,2-Dibromoethane	1 U	:
108-88-3		1 U	
	Chlorobenzene	1 U	- [
	Ethylbenzene	1 U	í
100-42-5		1   U	
	Xylenes (total)	1 U	!
	1,3-Dichlorobenzene	1 U	!
	1,4-Dichlorobenzene	1 U	
	1,2-Dichlorobenzene	1 U	ļ
	1,2-Dibromo-3-chloropropane	1 U	ļ
	1,2-bibromo-3-chioropropane_1	1 U	
120-02-1	1,2,4-IIICHIOIODEHZEHE	ŢļŪ	

OLC02.0

## 1LÇE

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.014

Date Received: 04/27/00

Lab File ID: G0918

Date Analyzed: 04/28/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

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EDPN2

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.015 Date Received: 04/27/00

Lab File ID: G0919 Date Analyzed: 04/28/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

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#### ILCE

# LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDPN2

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.015

Lab File ID: G0919

Date Received: 04/27/00 Date Analyzed: 04/28/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO. LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDPN3

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.016 Date Received: 04/27/00

Date Analyzed: 04/27/00 Lab File ID: G0898

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
	Bromomethane	1	İυ
	Vinyl chloride	1	U
	Chloroethane	1	U
75-09-2	Methylene chloride	1	J
67-64-1		5	U
75-15-0	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
	2-Butanone	5	U
174-97-5	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	υ
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
	cis-1,3-Dichloropropene	1	U
¦ 79-01-6	Trichloroethene	11	U
	Dibromochloromethane	1	U
	1,1,2-Trichloroethane	1	U
71-43-2		1	U
	trans-1,3-Dichloropropene	1	U
75-25-2		1	U
	4-Methyl-2-pentanone	1 5	
	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
	1,2-Dibromoethane	1	U
108-88-3		1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
100-42-5	Styrene	1	
1330-20-7	Xylenes (total)	1	U
	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
	1,2-Dichlorobenzene	1	U
	1,2-Dibromo-3-chloropropane	1	U
	1,2,4-Trichlorobenzene	1	

## 1LCE

EPA SAMPLE NO. 19

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDPN3

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.016

Date Received: 04/27/00

Lab File ID: G0898

Date Analyzed: 04/27/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDPN4

Q

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: 6033.017 Date Received: 04/27/00

COMPOUND

Lab File ID: G0920 Date Analyzed: 04/28/00

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCF6

CAS NO.

Purge Volume: 20 (mL) Dilution Factor: 1.0

(ug/L)

CONCENTRATION

		(49/11/	V
74-97.3	Chloromethane	1	T 7
	Bromomethane	1	-
	Vinyl chloride	1	
	Chloroethane	1	
	Methylene chloride	- •	
67-64-1		2¦ 5¦	
	Carbon disulfide	1	
	1,1-Dichloroethene	1	
	1,1-Dichloroethane		
	cis-1,2-Dichloroethene	1 1	
156-59-2	trans-1,2-Dichloroethene	1   1	
156-60-5	Chloroform	1   1	
107 06 0	1 2 Dishlanshham	1 1	
10/-06-2	1,2-Dichloroethane	1   1	
	2-Butanone	5   1	
	Bromochloromethane	1 1	
71-55-6	1,1,1-Trichloroethane	1 1	
56-23-5	Carbon tetrachloride	1   1	
75-27-4	Bromodichloromethane	1   1	
78-87-5	1,2-Dichloropropane	1   1	
	cis-1,3-Dichloropropene	1 1	
	Trichloroethene	1   1	
	Dibromochloromethane	1   1	
	1,1,2-Trichloroethane	1   1	
	Benzene	1   t	
	trans-1,3-Dichloropropene	1   (	
75-25-2	Bromoform	1   1	
108-10-1	4-Methyl-2-pentanone	5   0	J
	2-Hexanone	5   0	J
	Tetrachloroethene	1 0	J ¦
79-34-5	1,1,2,2-Tetrachloroethane	110	J ¦
106-93-4	1,2-Dibromoethane	1 1	J ¦
108-88-3		1   1	J
108-90-7	Chlorobenzene	1   1	J
100-41-4	Ethylbenzene	1   1	J į
100-42-5	Styrene	1 1	J
	Xylenes (total)	1 1	
541-73-1	1,3-Dichlorobenzene	1 1	
106-46-7	1,4-Dichlorobenzene	1 1	
95-50-1	1,2-Dichlorobenzene	1   U	
	1,2-Dibromo-3-chloropropane	1   1	
	1,2,4-Trichlorobenzene	1   0	
120-02-1	1, 2, 4-111cmiorobenzene	1	, ! !

# 1LCE

EPA SAMPLE NO ""

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDPN4

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.017

Date Received: 04/27/00

Lab File ID: G0920

Date Analyzed: 04/28/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPN5

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.006

Date Received: 04'27/00

Lab File ID: G0899

Date Analyzed: 04/28/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60

(m)

CONCENTRATION

CAS NO. COMPOUND (ug/L)Q 74-87-3-----Chloromethane 1 | U 74-83-9-----Bromomethane 1 U 75-01-4-----Vinyl chloride\_\_\_\_ 1 | U 75-00-3-----Chloroethane 1(U 75-09-2-----Methylene chloride 2 U 67-64-1------Acetone 5 | U 75-15-0-----Carbon disulfide 1 | U 75-35-4-----1,1-Dichloroethene 1 U 75-34-3-----1,1-Dichloroethane 1 156-59-2----cis-1,2-Dichloroethene 1 | U 156-60-5----trans-1,2-Dichloroethene 1 | U 67-66-3-----Chloroform 1 U 107-06-2----1,2-Dichloroethane\_\_\_\_ 1 | U 78-93-3-----2-Butanone 5 | U 74-97-5-----Bromochloromethane 1 | U 1 | U 71-55-6-----1,1,1-Trichloroethane 56-23-5-----Carbon tetrachloride 1 | U 75-27-4-----Bromodichloromethane\_\_\_\_ 1 | U 78-87-5----1,2-Dichloropropane\_\_\_ 1 U 10061-01-5----cis-1,3-Dichloropropene\_\_\_ 1 | U 1 | U 79-01-6-----Trichloroethene 124-48-1-----Dibromochloromethane 1 U 79-00-5-----1,1,2-Trichloroethane 1 | U 71-43-2----Benzene 1 U 10061-02-6----trans-1,3-Dichloropropene 1 U 75-25-2-----Bromoform 1 U 108-10-1----4-Methyl-2-pentanone 5 U 591-78-6----2-Hexanone\_\_\_\_ 5 U 127-18-4-----Tetrachloroethene 1 U 79-34-5-----1,1,2,2-Tetrachloroethane 1 | U 106-93-4----1,2-Dibromoethane 1 | U 108-88-3----Toluene 1 | U 108-90-7-----Chlorobenzene\_ 1 U 1 | U 100-41-4-----Ethylbenzene\_\_\_ 100-42-5-----Styrene 1 1 0 1330-20-7------Xylenes (total) 1 | U 541-73-1-----1,3-Dichlorobenzene 1 U 106-46-7----1,4-Dichlorobenzene\_\_\_\_\_ 1 | U 95-50-1----1,2-Dichlorobenzene\_ 1 | U 96-12-8-----1,2-Dibromo-3-chloropropane\_| 1 | U 1 | U 120-82-1-----1,2,4-Trichlorobenzene

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## 1LCE

EPA SAMPLE NO

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.006

Date Received: 04/27/00

Lab File ID: G0899

Date Analyzed: 04/28/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q ====-
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## 1LCA

EPA SAMPLE NO

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDPN6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Date Received: 04/27/00

Lab Sample ID: 6033.007

Lab File ID: G0901

Date Analyzed: 04/28/00

CONCENTRATION

Purge Volume: 20 (mL)

Dilution Factor: 1.0

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	1	Ū
	Vinyl chloride	<del> i</del>	Ū
	Chloroethane	1	Ū
	Methylene chloride	<b>-</b> ;	Ū
67-64-1	*	<del>-</del> :	Ū
	Carbon disulfide	<del>-</del> ;	U
	1,1-Dichloroethene	- ;	Ū
	1,1-Dichloroethane	$\frac{1}{4}$	: -
	cis-1,2-Dichloroethene	-i i	:
	trans-1,2-Dichloroethene	- :	Ū
	Chloroform	<del>-</del> ;	U
	1,2-Dichloroethane	- i	U
	2-Butanone	- ;	U
	Bromochloromethane	- i	, U
	1,1,1-Trichloroethane		U
	Carbon tetrachloride	~ •	บ
	Bromodichloromethane	- ;	บ
	1,2-Dichloropropane	2	
	cis-1,3-Dichloropropene		
	Trichloroethene		U
	Dibromochloromethane	- ;	U
		- :	U
	1,1,2-Trichloroethane	_	
71-43-2		_	
	trans-1,3-Dichloropropene		-
	Bromoform	_ [ 1	-
	4-Methyl-2-pentanone	-	-
	2-Hexanone	.   5	_
	Tetrachloroethene	_	_
	1,1,2,2-Tetrachloroethane		
	1,2-Dibromoethane	. 1	
108-88-3		.   1	_
	Chlorobenzene	. [ 1 ]	
	Ethylbenzene	. ]	-
100-42-5		. ] 1	U
	Xylenes (total)	1	U
	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
	1,2-Dibromo-3-chloropropane	1	U
	1,2,4-Trichlorobenzene	1	U
	,	· i	

## 11CE

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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	1
11 J J 18 1 ~	
EDPN6	1
	j

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.007 Date Received: 04/27/00

Lab File ID: G0901 Date Analyzed: 04/28/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
CAS NUMBER  1.000075-43-4 2.000060-29-7 3.4 4.5 5.6 7.8 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25.	Methame, dichle_ofluoro- Ethyl ether	RT ======= 6.13 6.92	(ug/L) ====================================	į -
26.   27.   28.   29.   30.				





lLCA

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDPN7

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.008 Date Received: 04/27/00

Lab File ID: G0903 Date Analyzed: 04/28/00

Dilution Factor: 1.0 Purge Volume: 20 (mL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
	Chloromethane		U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene chloride		
67-64-1		5	
75-15-0	Carbon disulfide	0.5	
75-35-4	1,1-Dichloroethene		
	1,1-Dichloroethane		
	cis-1,2-Dichloroethene	0.7	
	trans-1,2-Dichloroethene	] 1	
	Chloroform	1	:
107-06-2	1,2-Dichloroethane		
	2-Butanone	5	
	Bromochloromethane	1	
71-55 <b>-</b> 6 <b>-</b>	1,1,1-Trichloroethane		
	Carbon tetrachloride	1	
	Bromodichloromethane	1	:
78-87-5	1,2-Dichloropropane	1	:
10061-01-5	cis-1,3-Dichloropropene	1	
79-01-6	Trichloroethene		
	Dibromochloromethane	1	
	1,1,2-Trichloroethane	1	
71-43-2	Benzene trans-1,3-Dichloropropene	0.9	
		1	
	Bromoform	1	
108-10-1	4-Methyl-2-pentanone		:
591-78-6	2-Hexanone	5	
127-18-4	Tetrachloroethene	1	
79-34-5	1,1,2,2-Tetrachloroethane		
	1,2-Dibromoethane	1	
108-88-3		1	
108-90-7	Chlorobenzene	1	
100-41-4	Ethylbenzene		
	Styrene_	1	1
	Xylenes (total)	1	
	1,3-Dichlorobenzene	1	
	1,4-Dichlorobenzene	1	
	1,2-Dichlorobenzene	1	
	1,2-Dibromo-3-chloropropane_	1	
120-82-1	1,2,4-Trichlorobenzene	1	U
		il	

#### lLCE

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

	,
EDPN7	ı
EDPN/	- 1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.008

Date Received: 04/27/00

Lab File ID: G0903

Date Analyzed: 04/28/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000075-43-4 2.000060-29-7 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20.	1	!	(ug/L) ====================================	! ~
22   23				
27. 28. 29.				

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

VLCS94

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCF6

Lab Sample ID: GVLCS058

Date Received:

Lab File ID: G0892

Date Analyzed: 04/27/00

CONCENTRATION

(ug/L)

Purge Volume: 20

Dilution Factor: 1.0

GC Column: DB-624

ID: 0.53 (mm) Length: 60

0

1 U

CAS NO.

COMPOUND

(mL)

74-87-3-----Chloromethane

106-46-7-----1,4-Dichlorobenzene

| 95-50-1-----1,2-Dichlorobenzene\_\_

96-12-8-----1,2-Dibromo-3-chloropropane\_ 120-82-1-----1,2,4-Trichlorobenzene\_\_\_

74-83-9-----Bromomethane 1 U 75-01-4-----Vinyl chloride 4 75-00-3-----Chloroethane 1 | U 75-09-2-----Methylene chloride 2 U 67-64-1-----Acetone 5 U 75-15-0-----Carbon disulfide 1 U 75-35-4-----1,1-Dichloroethene 1 U 75-34-3-----1,1-Dichloroethane 1 | U 156-59-2----cis-1,2-Dichloroethene\_ 1 | U 156-60-5----trans-1,2-Dichloroethene 1 U 67-66-3-----Chloroform 1 U 107-06-2----1,2-Dichloroethane 5 78-93-3-----2-Butanone 5 | U 1 | U 74-97-5----Bromochloromethane 71-55-6-----1,1,1-Trichloroethane 1 U 56-23-5-----Carbon tetrachloride 4 1 75-27-4-----Bromodichloromethane 1 | U 78-87-5----1,2-Dichloropropane 5 | 10061-01-5----cis-1,3-Dichloropropene 5 1 79-01-6-----Trichloroethene 124-48-1-----Dibromochloromethane 1 | U 79-00-5----1,1,2-Trichloroethane\_ 4 ! 71-43-2-----Benzene 5 10061-02-6----trans-1,3-Dichloropropene 1 U 75-25-2----Bromoform 4 108-10-1----4-Methyl-2-pentanone\_\_ 5 U 591-78-6-----2-Hexanone 5 U 127-18-4-----Tetrachloroethene 4 1 | U 79-34-5-----1,1,2,2-Tetrachloroethane 106-93-4-----1,2-Dibromoethane 1 ( U 108-88-3-----Toluene 108-90-7-----Chlorobenzene\_ 1 | U 100-41-4-----Ethylbenzene 1 U 100-42-5-----Styrene 1 U 1330-20-7-----Xylenes (total) 1 U 1 U 541-73-1-----1,3-Dichlorobenzene

1 U

1 | U

1 | U

# 11CA

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

VLCS97

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: GVLCS061 Date Received: \_\_\_\_

Lab File ID: G0942 Date Analyzed: 05/02/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-83-9	Chloromethane		1 U
75-01-4	Vinyl chloride	;	<del>!</del>
	Chloroethane		
1 /5-09-2	Methylene chloride	-	2   U
67-64-1		;	5 U
	Carbon disulfide	i	LIU
	1,1-Dichloroethene	i	LIU
	1,1-Dichloroethane	i	ַ טְּי
	cis-1,2-Dichloroethene	-	U
	trans-1,2-Dichloroethene	i	LU
	Chloroform	-	. U
	1,2-Dichloroethane	i	[ ]
	2-Butanone	i	U
	Bromochloromethane	:	.   U
	1,1,1-Trichloroethane	i	. ט :
	Carbon tetrachloride	·	
	Bromodichloromethane	:	. U
	1,2-Dichloropropane	4	` <del></del> :
	cis-1,3-Dichloropropene	4	`i
	Trichloroethene	1	·
	Dibromochloromethane	1	U
	1,1,2-Trichloroethane	í 4	::
71-43-2		5	::
	trans-1,3-Dichloropropene	i -	U
	Bromoform	4	· :
	4-Methyl-2-pentanone	-	U
	2-Hexanone	-	U
	Tetrachloroethene	4	::
	1,1,2,2-Tetrachloroethane	-	U
;	1,2-Dibromoethane	i 4	;;
108-88-3		i	Ü
	Chlorobenzene	;	U
	Ethylbenzene	<u>.</u>	Ū
100-42-5	· · · · · · · · · · · · · · · · · · ·	_	U
	Xylenes (total)	;	U
	1,3-Dichlorobenzene		U
•	1,4-Dichlorobenzene	3	:
	1,2-Dichlorobenzene		U
	1,2-Dibromo-3-chloropropane_		ן טן
120-82-1	1,2,4-Trichlorobenzene	1	U
			1

# FOM CONC' MALER SEWINOPALIFE SURROGATE RECOVERY

Contract: 68-D7-0004

Lab Name: PDP ANALYTICAL SERVICES

Lab Code: PDP Case No.: 27986 SAS No.: EDCF6

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TUO		# DEU #	# DEE8	# D====	# DEY*	SEC #	%KEC #	SAMPLE NO.	:
TOT	OTHER	LBD	SED	BHL H	HdL HdL	BBb	NBZ	EPA NO	! !
<u> </u>		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			1144		2 4.1		i

(53 - 150)%BEC QC LIMITS

TBP = 2,4,6-Tribromophenol (15-130) SEB = S-Elnorophenol (TZT-ST) bHr = byeuoj-q2 (SII-SI) TPH = Terphenyl-dl4 (T8-T40) EBP = 2 - Fluorobiphenyl(30-112) NBZ = Nitrobenzene-dS

D Surrogate diluted out. \* Values outside of contract required QC limits. # Column to be used to flag recovery values.

3 LCB

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE LAB CONTROL SAMPLE RECOVERY

.

SLCS69

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: SVOL601

LCS Lot No.:

Lab File ID: H0992

Date Extracted: 05/01/00

LCS Aliquot: 1000 (uL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Injection Volume: 1.0 (uL)

COMPOUND	AMOUNT ADDED	AMOUNT RECOVERED	%REC #	QC LIMITS
COMPOUND	(ng)	(ng)	%REC #	TTMITIS I
Phenol	40000	34000	85	40-120
bis(2-Chloroethyl)ether	20000	17000	85	50-110
2-Chlorophenol	40000	36000	90	50-110
N-Nitroso-di-n-propylamine	20000	18000	90	30-110
Hexachloroethane	20000	10000	50	20-110
Isophorone	20000	13000	65	50-110
Naphthalene	20000	17000	85	30-110
4-Chloroaniline	40000	30000	75	10-120
2,4,6-Trichlorophenol	40000	38000	95	40-120
2,4-Dinitrotoluene	20000	13000	65	30-120
Diethylphthalate	20000	14000	70	50-120
N-Nitrosodiphenylamine	20000	12000	60	30-110
Hexachlorobenzene	20000	15000	75	40-120
Benzo(a)pyrene	20000	17000	85	50-120
L	! !	l		

- # Column to be used to flag LCS recovery with an asterisk.
- \* Values outside of QC limits.

LCS Recovery: 0 outside limits out of 14 total.

COMMENTS:	

41CB

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE METHOD BLANK SUMMARY

SBLK37

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: SVOB710

Date Extracted: 05/01/00

Lab File ID: H0991

Date Analyzed: 05/11/00

Instrument ID: H-HP5973

Time Analyzed: 1214

# THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

	EPA	LAB	LAB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
	=======================================	==========	=======================================	=======
01	SLCS69	SVOL601	H0992	05/11/00
02	EDPM3	6033.002	H0993	05/11/00
03	EDPM6	6033.003	H0994	05/11/00
04	EDPM7	6033.004	H0995	05/11/00
05	EDPN5	6033.006	H0996	05/11/00
06	EDPN6	6033.007	H0997	05/11/00
07	EDPN7	6033.008	H0998	05/11/00
08	EDCF6	6033.009	H0999	05/11/00
09	EDCF7	6033.010	H1000	05/11/00
10	EDCF8	6033.011	H1001	05/11/00
11	EDCF9	6033.013	H1002	05/11/00 ¦
12	EDPN1	6033.014	H1003	05/11/00
13	EDPN2	6033.015	H1004	05/11/00
14		6033.017	H1005	05/11/00
15	EDPN0	6033.018	Н1008	05/12/00
16	EDCG3	6033.019	H1009	05/12/00
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COMMENTS:	

#### 1LCB

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SBLK37

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: SVOB710

Date Received: \_\_\_\_

Lab File ID: H0991

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Injection Volume: 1.0 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
108-95-2 111-44-4 95-57-8 95-48-7 108-60-1 106-44-5	Pherplbis(2-Chloroetnyl)ether2-Chlorophenol2,2'-oxybis(1-Chloropropane)4-Methylphenol	5 5 5 5 5 5	n n n n
621-64-7	N-Nitroso-di-n-propylamine	5 5	U    U
98-95-3	Nitrobenzene	:	U
	Isophorone	: -	U
105-67-9	2,4-Dimethylphenol	:	U
111-91-1	bis(2-Chloroethoxy)methane_	-	U
_	2,4-Dichlorophenol	: -	U   U
	4-Chloroaniline	5	
	Hexachlorobutadiene	5	
	4-Chloro-3-methylphenol	:	Ū
	2-Methylnaphthalene Hexachlorocyclopentadiene	5	- !
	2,4,6-Trichlorophenol	5	-
	2,4,5-Trichlorophenol	20	U i
1 91-58-7	2-Chloronaphthalane	5	U ¦
	2-Nitroaniline	20	:
	Dimethylphthalate	5	-
	Acenaphthylene	5	
	2,6-Dintrotoluene	5	•
	3-Nitroaniline	20	- ,
83-32-9   	Acenaphthene	5	

lLCC LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE MO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: SVOB710

Date Received: \_\_\_\_\_

Lab File ID: H0991

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL)

Dilution Factor: 1.0

Injection Volume: 1 (uL)

	(ug/L)	Q
51-28-52,4-Dinitrophenol   100-02-74-Nitrophenol   132-64-9Dibenzofuran   121-14-22,4-Dinitrotoluene   84-66-2Diethylphthalate   7005-72-34-Chlorophenyl-phenylether   86-73-7Fluorene   100-01-64-Nitroaniline   534-52-14,6-Dinitro-2-methylphenol   86-30-6N-Nitrosodiphenylamine (1)   101-55-34-Bromophenyl-phenylether   118-74-1Hexachlorobenzene   87-86-5Pentachlorophenol   85-01-8Phenanthrene   120-12-7Anthracene   84-74-2Di-n-butylphthalate   206-44-0Fluoranthene   129-00-0Pyrene   85-68-7Butylbenzylphthalate   91-94-13,3'-Dichlorobenzidine   56-55-3Benzo(a) anthracene   218-01-9	20 20 5 5 5 5 5 5 5 6 7 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7	מממממממממממממממממממממ

(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: SVOB710

Date Received: \_\_\_\_\_

Lab File ID: H0991

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

EST. CONC. COMPOUND NAME CAS NUMBER RT (uq/L) 5. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27.\_ 28. \_\_\_ 29.\_ 30.\_\_\_\_



1LCB

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCF6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.009

Date Received: 04/27/00

Date Extracted: 05/01/00

Lab File ID: H0999

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Sample Volume: 1000 (mL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	MC Q
108-95-2	Phenol		ร   บ

	T	τ.
108-95-2Phenol	5	เ
111-44-4bis(2-Chloroethyl)ether	5	U
95-57-82-Chlorophenol	5	U
95-48-72-Methylphenol	1 5	U
108-60-12,2'-oxybis(1-Chloropropane)	1 5	U
106-44-54-Methylphenol	5	ĺυ
621-64-7N-Nitroso-di-n-propylamine	5	U
67-72-1Hexachloroethane	5	U
98-95-3Nitrobenzene	5	ĺυ
78-59-1Isophorone	5	ĺυ
88-75-52-Nitrophenol	5	U
105-67-92,4-Dimethylphenol	5	U
111-91-1bis(2-Chloroethoxy)methane	5	U
120-83-22,4-Dichlorophenol	5	U
91-20-3Naphthalene	5	U
106-47-84-Chloroaniline	5	U
87-68-3Hexachlorobutadiene	5	U
59-50-74-Chloro-3-methylphenol	<b>\</b> 5	U
91-57-62-Methylnaphthalene	<b>!</b> 5	U I
77-47-4Hexachlorocyclopentadiene	5	U
88-06-22,4,6-Trichlorophenol	5	U
95-95-42,4,5-Trichlorophenol	20	U
91-58-72-Chloronaphthalane	<b> </b> 5	U
88-74-42-Nitroaniline	20	U
131-11-3Dimethylphthalate	5	U
208-96-8Acenaphthylene	<b>!</b> 5 <b>!</b>	U
606-20-22,6-Dintrotoluene	5	U I
99-09-23-Nitroaniline	20	U
83-32-9Acenaphthene	5	U I
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

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EDCF6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab File ID: H0999 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
51-28-5 100-02-7 132-64-9 121-14-2 84-66-2	COMPOUND 2,4-Dinitrophenol4-NitrophenolDibenzofuran2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenylether	20 20 5 5	
86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1	Fluorene4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzene	5 20 20 5 5	U
85-01-8 120-12-7 84-74-2 206-44-0	PentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluoranthene	5 5 5 5	บ บ บ
85-68-7 91-94-1 56-55-3 218-01-9	PyreneButylbenzylphthalate3,3'-DichlorobenzidineBenzo(a)anthraceneChrysenebis(2-Ethylhexyl)phthalate	5 5 5 5	U U U U U U
117-84-0 205-99-2 207-08-9 50-32-8 193-39-5 53-70-3	Di-n-octylphthalateBenzo(b) fluorantheneBenzo(k) fluorantheneBenzo(a) pyreneIndeno(1,2,3-cd) PyreneDibenz(a,h) anthracene	5 5 5 5 5 5 5	ט ט ט ט ט ט
	Benzo(g,h,i)perylene		

(1) - Cannot be separated from Diphenylamine



LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDCF6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.009

Date Received: 04/27/00

Lab File ID: H0999

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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lLCB EPA SAMPLE NO. LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCF7

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Date Received: 04/27/00

Lab Sample ID: 6033.010

Date Extracted: 05/01/00

Lab File ID: H1000

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Sample Volume: 1000 (mL)

Injection Volume: 1.0 (uL)

CONCENTRATION CAS NO. COMPOUND Q (ug/L)

	· 5, ,	~
108-95-2Phenol	5	U
111-44-4bis(2-Chloroethyl)ether		U
95-57-82-Chlorophenol	5	ប
95-48-72-Methylphenol	1 5	¦υ
108-60-12,2'-oxybis(1-Chloropropane)	5	U
106-44-54-Methylphenol	5	U
621-64-7N-Nitroso-di-n-propylamine	5	U
67-72-1Hexachloroethane	5	Ū
98-95-3Nitrobenzene	5	Ū
78-59-1Isophorone	5	Ū
88-75-52-Nitrophenol	:	Ū
105-67-92,4-Dimethylphenol	:	Ū
111-91-1bis (2-Chloroethoxy) methane	: -	U
120-83-22,4-Dichlorophenol		Ū
91-20-3Naphthalene_	:	U
106-47-84-Chloroaniline	:	Ū
87-68-3Hexachlorobutadiene	: =	U
59-50-74-Chloro-3-methylphenol		Ū
91-57-62-Methylnaphthalene	:	U
77-47-4Hexachlorocyclopentadiene	!	ប
88-06-22,4,6-Trichlorophenol	:	U
95-95-42,4,5-Trichlorophenol	20	1 1
91-58-72-Chloronaphthalane	:	ប
88-74-42-Chioronaphthalane	20	
	•	U I
131-11-3Dimethylphthalate	:	: -
208-96-8Acenaphthylene		{U {
606-20-22,6-Dintrotoluene	•	U
99-09-23-Nitroaniline	20	: :
83-32-9Acenaphthene	5	ប
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS AMALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCF7

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.010

Date Received: 04/27/00

Lab File ID: H1000

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
51-28-5 100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 84-74-2 206-44-0 129-00-0 85-68-7 91-94-1 56-55-3 218-01-9 117-81-7 117-84-0 205-99-2 207-08-9 50-32-8 193-39-5	2,4-Dinitrophenol4-Nitrophenol4-Dibenzofuran2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenyletherFluorene4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluoranthene	200555500555555555555555555555555555555	מממממממממממממממממממ
191-24-2 	Benzo(g,h,i)perylene	5	U

(1) - Cannot be separated from Diphenylamine

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

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EDCF8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.011 Date Received: 04/27/00

Lab File ID: H1001 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
51-28-5 100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 120-12-7 84-74-2 206-44-0 129-00-0 85-68-7 91-94-1 56-55-3 218-01-9 117-81-7 117-84-0 205-99-2 207-08-9 50-32-8 193-39-5 53-70-3	2,4 Din Troph Tol4-NitrophenolDibenzofuran2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenyletherFluorene4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneDi-n-butylphthalateFluorantheneButylbenzylphthalateBenzo(a) anthracenebis(2-Ethylhexyl)phthalate	20 20 5 5 5 5 20 20 5 5 5 5 5 5 5 5 5 5	ם מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ
191-24-2	Benzo(g,h,i)perylene	5	U

(1) - Cannot be separated from Diphenylamine

1LCF EPA SAMPLE NO. LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCF8

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.011

Date Received: 04/27/00

Lab File ID: H1001

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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11CB LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCF9 Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.013 Date Received: 04/27/00

Lab File ID: H1002 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q 
108-95-2 111-44-4 95-57-8 95-48-7 108-60-1 106-44-5 621-64-7 98-95-3 98-95-3 105-67-9 111-91-1 120-83-2 111-91-1 120-83-2 91-20-3 87-68-3 91-57-6 91-57-6 95-95-4 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7		5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ם מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ
83-32-9	Acenaphthene	5	U 



EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCF9

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.013

Date Received: 04/27/00

Lab File ID: H1002

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
51-28-5 100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 84-74-2 206-44-0 129-00-0 85-68-7 91-94-1 56-55-3 218-01-9 117-84-0 117-84-0 205-99-2 207-08-9 50-32-8 193-39-5	2,4-Dinitropherol4-NitrophenolDibenzofuran2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenyletherFluorene4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluorantheneButylbenzylphthalateButylbenzylphthalateBenzo(a)anthraceneChryseneDi-n-octylphthalateDi-n-octylphthalateBenzo(b)fluoranthene	20 20 55 55 50 20 55 55 55 55 55 55 55 55 55 55 55 55 55	
	Dibenz(a,h)anthracene	5   5	

(1) - Cannot be separated from Diphenylamine

1LCF EPA SAMPLE MY LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

TENTATIVELY IDENTIFIED COMPOUNDS

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ontract: 68-D7-0004	act · 68-D7-0004	1			1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.013 Date Received: 04/27/00

Lab File ID: H1002 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCG3

Lab Code: PDP Case No.: 27986 SAS: No.: SDG No.: EDCF6

Date Received: 04/27/00

Lab Sample ID: 6033.019

Lab File ID: H1009

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.019

Date Received: 04/27/00

Lab File ID: H1009

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q 
100-02-7	4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluoranthenePyreneButylbenzylphthalate3,3'-Dichlorobenzidine	205555005555555555555555555555555555555	מממממממממממממממממממממ
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(1) - Cannot be separated from Diphenylamine

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.019 Date Received: 04/27/00

Lab File ID: H1009 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EDPM3

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0304

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.002

Date Received: 04/27/00

Lab File ID: H0993

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS	NO.	COMPOUND	CONCENT	 1	Ç	)
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108-95-2	Phenol	5	   U
	bis(2-Chloroethyl)ether	5	Ū
	2-Chlorophenol	5	ĺΰ
	2-Methylphenol	5	เบิ
	2,2'-oxybis(1-Chloropropane)	5	Ū
	4-Methylphenol	5	U
	N-Nitroso-di-n-propylamine	5	U
	Hexachloroethane	5	<b>ט</b>
	Nitrobenzene	5	U
	Isophorone	5	U
	2-Nitrophenol	5	U
	2,4-Dimethylphenol	5	U
	bis(2-Chloroethoxy)methane	5	U
	2,4-Dichlorophenol	5	<b>U</b>
	Naphthalene	5	U
	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	<b> </b> 5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	ן ט
95-95-4	2,4,5-Trichlorophenol	20	ן ט
	2-Chloronaphthalane	5	ן ט
	2-Nitroaniline	20	ן ט
131-11-3	Dimethylphthalate	5	U
	Acenaphthylene	5	U
	2,6-Dintrotoluene	5	U ;
	3-Nitroaniline	20	ע
	Acenaphthene	5	U
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

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EDPM3

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.002 Date Received: 04/27/00

Lab File ID: H0993 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 120-12-7 84-74-2 129-00-0 85-68-7 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 117-81-7 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0	Butylbenzylphthalate3,3'-DichlorobenzidineBenzo(a) anthraceneChrysenebis(2-Ethylhexyl)phthalateDi-n-octylphthalateBenzo(b) fluorantheneBenzo(k) fluorantheneBenzo(a) pyreneIndeno(1,2,3-cd) Pyrene	20 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ע ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט
191-24-2	Benzo(g,h,i)perylene	!	ŭ

(1) - Cannot be separated from Diphenylamine

# TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.002

Date Received: 04/27/00

Lab File ID: H0993

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

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EDPM6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.003 Date Received: 04/27/00

Lab File ID: H0994 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
95-57-8 108-60-1 108-60-1 106-44-5 621-64-7 98-95-3 98-95-3 105-67-9 111-91-1 120-83-2 111-91-1 120-83-2 91-20-3 106-47-8 87-68-3 91-57-6 77-47-4 88-06-2 91-58-7 91-58-7 91-58-7 91-58-7 91-58-7 91-58-74-4 91-58-96-8 99-09-2	bis(2-Chloroethyl)ether2-Chlorophenol2-Methylphenol2,2'-oxybis(1-Chloropropane)4-MethylphenolN-Nitroso-di-n-propylamineHexachloroethaneNitrobenzeneIsophorone2-Nitrophenol2,4-Dimethylphenolbis(2-Chloroethoxy)methane2,4-DichlorophenolNaphthalene4-ChloroanilineHexachlorobutadiene4-Chloro-3-methylphenol2-Methylnaphthalene4-Chlorocyclopentadiene2,4,6-Trichlorophenol2,4,5-Trichlorophenol2,4,5-Trichlorophenol2-NitroanilineDimethylphthalateAcenaphthylene2,6-Dintrotoluene3-Nitroaniline	55555555555555555555555555555555555555	מ מ מ מ מ מ מ מ
03-32-9   	Acenaphthene		U .

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET EDPM6 Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.003 Date Received: 04/27/00

Lab File ID: H0994 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
!		<del></del>	1
51-28-5	2,4-Dinitrophenol	20	ប
100-02-7	4-Nitrophenol	20	U
	Dibenzofuran	<sup>-</sup>   5	U
121-14-2	2,4-Dinitrotoluene	5	U
	Diethylphthalate	5	U
7005-72-3	4-Chlorophenyl-phenylether_	- [ 5	U
86-73-7	Fluorene	5	U
100-01-6	4-Nitroaniline	20	ĺυ
	4,6-Dinitro-2-methylphenol	20	Ū
	N-Nitrosodiphenylamine (1)	5	Ū
	4-Bromophenyl-phenylether	- [ 5	ĺΰ
	Hexachlorobenzene	5	ĺυ
	Pentachlorophenol	1 20	Ū
	Phenanthrene	·   5	ĺΰ
	Anthracene	·   5	Ìυ
	Di-n-butylphthalate	·	Ū
	Fluoranthene	·   5	İυ
129-00-0		5	U
	Butylbenzylphthalate	5	U
	3,3'-Dichlorobenzidine	·   5	U
	Benzo(a) anthracene		U
	Chrysene	·	U
	bis(2-Ethylhexyl)phthalate		ij
117-84-0	Di-n-octylphthalate	·   5	ĺυ
	Benzo(b) fluoranthene	·   5	Ū
	Benzo(k) fluoranthene	5	Ū
	Benzo(a)pyrene	5	Ū
	Indeno(1,2,3-cd)Pyrene	5	<u></u> וֹט
	Dibenz(a,h)anthracene		ן ט
	Benzo(q,h,i)perylene		U
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(1) - Cannot be separated from Diphenylamine

### 1LCF

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPM6

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.003 Date Received: 04/27/00

Lab File ID: H0994 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Dale Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
	Phenobarbital	23.12	= = = = = = = = = = = = = = = = = = =	
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1LCF

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDPM6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.003

Date Received: 04/27/00

Lab File ID: H0994

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER   COMPOUND NAME     COMPOUND NAME     COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME   COMPOUND NAME		(ug/L)	Q
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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

EDPM7

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: 6033.004

Date Received: 04/27/00

Date Extracted: 05/01/00

Lab File ID: H0995 Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION CAS NO. COMPOUND (ug/L)

	<b>33.12</b> 33.13	(49/11)	¥	
108-95-2	Phenol	5		
111-44-4	bis(2-Chloroethyl)ether	5	U	-
95-57-8	2-Chlorophenol	5	U	į
	2-Methylphenol	5	U	ļ
	2,2'-oxybis(1-Chloropropane)	5	ľυ	I
	4-Methylphenol	5	U	1
621-64-7	N-Nitroso-di-n-propylamine	5	¦Ŭ	1
67-72-1	Hexachloroethane	5	U	
98-95-3	Nitrobenzene	5	\U	l
	Isophorone	5	U	ļ
	2-Nitrophenol	5	U	1
105-67-9	2,4-Dimethylphenol	5	U	1
	bis(2-Chloroethoxy)methane	5	U	
	2,4-Dichlorophenol	5	U	1
91-20-3	Naphthalene	5	¦U	i
106-47-8	4-Chloroaniline	5	U	i
87-68-3	Hexachlorobutadiene	5	U	!
59-50-7	4-Chloro-3-methylphenol	5	U	1
	2-Methylnaphthalene	5	U	!
	Hexachlorocyclopentadiene	5	U	ĺ
	2,4,6-Trichlorophenol	5	U	
	2,4,5-Trichlorophenol	20	U	
	2-Chloronaphthalane		U	
	2-Nitroaniline	20	U	
	Dimethylphthalate		U	
	Acenaphthylene	5	U	
	2,6-Dintrotoluene	5	U	
99-09-2	3-Nitroaniline	20	U	
83-32-9	Acenaphthene		Ū	
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

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EDPM7

CONCENTRATION

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.004 Date Received: 04/27/00

Lab File ID: H0995 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	(ug/L)	Q
51-28-5	2,4-Dinitrophenol	20	U
100-02-7	4-Nitrophenol	20	U
	Dibenzofuran	5	U
121-14-2	2,4-Dinitrotoluene	5	U
84-66-2	Diethylphthalate	5	U
	4-Chlorophenyl-phenylether	5	U
	Fluorene	5	U
100-01-6	4-Nitroaniline	20	Ū
534-52-1	4,6-Dinitro-2-methylphenol	20	Ū
	N-Nitrosodiphenylamine $(1)$	5	ĺυ
	4-Bromophenyl-phenylether	5	U
	Hexachlorobenzene	5	Ū
	Pentachlorophenol	20	U
	Phenanthrene	5	U
120-12-7	Anthracene	5	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	5	Ū
129-00-0	Pyrene	5	U
	Butylbenzylphthalate	5	U
	3,3'-Dichlorobenzidine	5	ני וֹ
	Benzo(a)anthracene	5	iu i
	Chrysene	5	lu i
	bis(2-Ethylhexyl)phthalate	4	J
	Di-n-octylphthalate		U
	Benzo(b) fluoranthene	5	U
	Benzo(k) fluoranthene	=	Ū
	Benzo(a) pyrene		Ū
	Indeno(1,2,3-cd)Pyrene	5	Ū
53-70-3	Dibenz(a,h)anthracene	-	Ū
191-24-2	Benzo(g,h,i)perylene	<del>-</del>	Ū
		3	i -

(1) - Cannot be separated from Diphenylamine

# TENTATIVELY IDENTIFIED COMPOUNDS

EDPM7

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.004

Date Received: 04/27/00

Lab File ID: H0995

Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE MO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDPN0

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.018

Date Received: 04/27/00

Lab File ID: H1008

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Dute Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION CAS NO. COMPOUND (ug/L) Q

108-95-2Phenol       5 U         111-44-4bis (2-Chloroethyl) ether       5 U         95-57-82-Chlorophenol       5 U         95-48-72-Methylphenol       5 U         108-60-12, 2'-oxybis (1-Chloropropane)       5 U         106-44-54-Methylphenol       5 U         621-64-7N-Nitroso-di-n-propylamine       5 U         67-72-1Hexachloroethane       5 U         98-95-3Nitrobenzene       5 U         78-59-1	
111-44-4bis (2-Chloroethyl) ether       5 U         95-57-82-Chlorophenol       5 U         95-48-72-Methylphenol       5 U         108-60-12,2'-oxybis (1-Chloropropane)       5 U         106-44-54-Methylphenol       5 U         621-64-7Nhitroso-di-n-propylamine       5 U         67-72-1Hexachloroethane       5 U         98-95-3Nitrobenzene       5 U         78-59-1Isophorone       5 U         88-75-52-Nitrophenol       5 U         105-67-92,4-Dimethylphenol       5 U         111-91-1bis (2-Chloroethoxy) methane       5 U         120-83-22,4-Dichlorophenol       5 U         91-20-3Naphthalene       5 U         106-47-84-Chloroaniline       5 U	
95-57-82-Chlorophenol       5 U         95-48-72-Methylphenol       5 U         108-60-12,2'-oxybis(1-Chloropropane)       5 U         106-44-54-Methylphenol       5 U         621-64-7N-Nitroso-di-n-propylamine       5 U         67-72-1Hexachloroethane       5 U         98-95-3Nitrobenzene       5 U         78-59-1Isophorone       5 U         88-75-52-Nitrophenol       5 U         105-67-92,4-Dimethylphenol       5 U         111-91-1bis(2-Chloroethoxy)methane       5 U         120-83-22,4-Dichlorophenol       5 U         91-20-3Naphthalene       5 U         106-47-84-Chloroaniline       5 U	
95-48-72-Methylphenol       5 U         108-60-12,2'-oxybis(1-Chloropropane)       5 U         106-44-54-Methylphenol       5 U         621-64-7Nhitroso-di-n-propylamine       5 U         67-72-1Hexachloroethane       5 U         98-95-3Nitrobenzene       5 U         78-59-1Isophorone       5 U         88-75-52-Nitrophenol       5 U         105-67-92,4-Dimethylphenol       5 U         111-91-1bis(2-Chloroethoxy)methane       5 U         120-83-22,4-Dichlorophenol       5 U         91-20-3Naphthalene       5 U         106-47-84-Chloroaniline       5 U	
108-60-12,2'-oxybis (1-Chloropropane)       5 U         106-44-54-Methylphenol       5 U         621-64-7N-Nitroso-di-n-propylamine       5 U         67-72-1Hexachloroethane       5 U         98-95-3Nitrobenzene       5 U         78-59-1Isophorone       5 U         88-75-52-Nitrophenol       5 U         105-67-92,4-Dimethylphenol       5 U         111-91-1bis (2-Chloroethoxy) methane       5 U         120-83-22,4-Dichlorophenol       5 U         91-20-3Naphthalene       5 U         106-47-84-Chloroaniline       5 U	
106-44-54-Methylphenol       5 U         621-64-7N-Nitroso-di-n-propylamine       5 U         67-72-1Hexachloroethane       5 U         98-95-3Nitrobenzene       5 U         78-59-1Isophorone       5 U         88-75-52-Nitrophenol       5 U         105-67-92,4-Dimethylphenol       5 U         111-91-1bis(2-Chloroethoxy)methane       5 U         120-83-22,4-Dichlorophenol       5 U         91-20-3Naphthalene       5 U         106-47-84-Chloroaniline       5 U	
621-64-7N-Nitroso-di-n-propylamine       5 U         67-72-1	
67-72-1	
98-95-3Nitrobenzene       5 U         78-59-1Isophorone       5 U         88-75-52-Nitrophenol       5 U         105-67-92,4-Dimethylphenol       5 U         111-91-1bis(2-Chloroethoxy)methane       5 U         120-83-22,4-Dichlorophenol       5 U         91-20-3Naphthalene       5 U         106-47-84-Chloroaniline       5 U	
78-59-1Isophorone       5 U         88-75-52-Nitrophenol       5 U         105-67-92,4-Dimethylphenol       5 U         111-91-1bis(2-Chloroethoxy)methane       5 U         120-83-22,4-Dichlorophenol       5 U         91-20-3Naphthalene       5 U         106-47-84-Chloroaniline       5 U	
88-75-52-Nitrophenol       5 U         105-67-92,4-Dimethylphenol       5 U         111-91-1bis(2-Chloroethoxy)methane       5 U         120-83-22,4-Dichlorophenol       5 U         91-20-3Naphthalene       5 U         106-47-84-Chloroaniline       5 U	
105-67-92,4-Dimethylphenol       5 U         111-91-1bis(2-Chloroethoxy)methane       5 U         120-83-22,4-Dichlorophenol       5 U         91-20-3Naphthalene       5 U         106-47-84-Chloroaniline       5 U	
111-91-1bis (2-Chloroethoxy) methane       5 U         120-83-22,4-Dichlorophenol       5 U         91-20-3Naphthalene       5 U         106-47-84-Chloroaniline       5 U	
120-83-22,4-Dichlorophenol       5 U         91-20-3Naphthalene       5 U         106-47-84-Chloroaniline       5 U	
91-20-3Naphthalene       5 U         106-47-84-Chloroaniline       5 U	
106-47-84-Chloroaniline 5 U	
**************************************	
87-68-3Hexachlorobutadiene	
or oo s meadement of obdet dateme	
59-50-74-Chloro-3-methylphenol 5 U	
91-57-62-Methylnaphthalene   5 U	
77-47-4Hexachlorocyclopentadiene 5 U	
88-06-22,4,6-Trichlorophenol   5 U	!
95-95-42,4,5-Trichlorophenol   20 U	-
91-58-72-Chloronaphthalane 5 U	ı
88-74-42-Nitroaniline 20 U	1
131-11-3Dimethylphthalate 5 U	
208-96-8Acenaphthylene 5 U	1
606-20-22,6-Dintrotoluene 5 U	i
99-09-23-Nitroaniline 20 U	
83-32-9Acenaphthene 5 U	

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDPNO

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.018 Date Received: 04/27/00

Lab File ID: H1008 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
51-28-5 100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 84-74-2 206-44-0 129-00-0 129-00-0 129-00-0 129-01-94-1 17-81-7 117-84-0 117-84-0 205-99-2	2,4 Dir troph nol4-Nitrophenol4-NitrophenolDibenzofuran2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenyletherFluorene4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluorantheneButylbenzylphthalateButylbenzylphthalateBenzo(a)anthraceneChrysenebis(2-Ethylhexyl)phthalate	(ug/L)  20 20 5 5 5 20 20 5 5 5 5 5 5 5 5 5 5	מממממממממממממממממ
207-08-9 50-32-8 193-39-5 53-70-3	Benzo(k) fluorantheneBenzo(a) pyreneIndeno(1,2,3-cd) PyreneDibenz(a,h) anthraceneBenzo(g,h,i) perylene		ם ט

(1) - Cannot be separated from Diphenylamine

# TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPN0

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.018 Date Received: 04/27/00

Lab File ID: H1008 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

4

EDPN1

Q

20 U

5 | U

5 U

5 | U

5 | U

20 U

CONCENTRATION

(ug/L)

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

COMPOUND

88-74-4----2-Nitroaniline

208-96-8------Acenaphthylene

83-32-9-----Acenaphthene

131-11-3-----Dimethylphthalate\_

606-20-2-----2,6-Dintrotoluene

99-09-2----3-Nitroaniline

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.014 Date Received: 04/27/00

Lab File ID: H1003 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO.

	3.	_
108-95-2Phenol	5	U
111-44-4bis(2-Chloroethyl)ether	:	U
95-57-82-Chlorophenol	:	Ü
95-48-72-Methylphenol	5	Ū
108-60-12,2'-oxybis(1-Chloropropane)	5	Ū
106-44-54-Methylphenol	5	U
621-64-7N-Nitroso-di-n-propylamine	5	Ū
67-72-1Hexachloroethane		Ü
98-95-3Nitrobenzene	5	Ū
78-59-1Isophorone		Ū
88-75-52-Nitrophenol	5	Ū
105-67-92,4-Dimethylphenol	<u>.</u> 5	Ū
111-91-1bis(2-Chloroethoxy) methane	5	Ū
120-83-22,4-Dichlorophenol		U
91-20-3Naphthalene		Ū
106-47-84-Chloroaniline	5	:
87-68-3Hexachlorobutadiene	5	IJ
59-50-74-Chloro-3-methylphenol	5 i	
91-57-62-Methylnaphthalene	5	
77-47-4Hexachlorocyclopentadiene	5	
88-06-22,4,6-Trichlorophenol	5	_
95-95-42,4;5-Trichlorophenol	20	_
91-58-72-Chloronaphthalane	5	-
	:	· -

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDPN1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.014

Date Received: 04/27/00

Date Extracted: 05/01/00

Lab File ID: H1003

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 120-12-7 84-74-2 206-44-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0 117-84-0	4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluoranthenePyreneButylbenzylphthalate3,3'-DichlorobenzidineBenzo(a) anthraceneChrysenebis(2-Ethylhexyl) phthalateDi-n-octylphthalateBenzo(b) fluorantheneBenzo(k) fluorantheneBenzo(a) pyreneIndeno(1,2,3-cd) PyreneDibenz(a,h) anthracene	5 5 5 5 0 0 0 5 5 5 5 5 5 5 5 5 5 5 5 5	ממממממממממממממממממ
191-24-2 	Benzo(g,h,i)perylene	5	i

(1) - Cannot be separated from Diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS

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EDP	7.7	- (
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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.014

Date Received: 04/27/00 Date Extracted: 05/01/00

Lab File ID: H1003

Date Analyzed: 05/11/00

Sample Volume: 1000 (mL)

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.		İ	<u> </u>	<u> </u>
3 ·		ļ	<u> </u>	
5.		!		
6.				ii
7.		i	i	
8.		i		1
9.				1
10.		1		
11.	1	! !	l	
12.	1			
13			<u> </u>	!!
14.		<u> </u>	<u> </u>	!i
15.			<u> </u>	!i
16.				<u> </u>
17.			i	<u>  </u>
18.				<u>  </u>
19.			İ—————	<u>  </u>
20.	-	<del></del>		
22.	·	<del></del>		!
23.				
24.				
25.				<u> </u>
26.	-			ii
27.	-			ii
28.			<del></del>	ii
29.			<del></del>	i —— i
30.			<del></del>	

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Lab Sample ID: 6033.015

Date Received: 04/27/00

Lab File ID: H1004

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

108-95-2	CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
111-91-1bis (2-Chloroethoxy) methane       5 U         120-83-22, 4-Dichlorophenol       5 U         91-20-3Naphthalene       5 U         106-47-84-Chloroaniline       5 U         87-68-3Hexachlorobutadiene       5 U         59-50-74-Chloro-3-methylphenol       5 U         91-57-62-Methylnaphthalene       5 U         77-47-4Hexachlorocyclopentadiene       5 U         88-06-22, 4, 6-Trichlorophenol       5 U         95-95-42, 4, 5-Trichlorophenol       20 U         91-58-72-Chloronaphthalane       5 U         88-74-42-Nitroaniline       20 U         131-11-3Dimethylphthalate       5 U         208-96-8Acenaphthylene       5 U         606-20-23-Nitroaniline       5 U	108-95-2 111-44-4 95-57-8 95-48-7 108-60-1 106-44-5 621-64-7 67-72-1 98-95-3 78-59-1 88-75-5	Phenolbis(2-Chloroethyl)ether2-Chlorophenol2,2'-oxybis(1-Chloropropane)4-MethylphenolN-Nitroso-di-n-propylamineHexachloroethaneNitrobenzeneIsophorone2-Nitrophenol	(ug/L) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	0 U U U U U U U U U U U U U U U U U U U
87-68-3	105-67-9 1111-91-1 120-83-2 91-20-3	2,4-Dimethylphenolbis(2-Chloroethoxy)methane2,4-DichlorophenolNaphthalene	5 5 5 5	บ บ บ
91-58-72-Chloronaphthalane       5 U         88-74-42-Nitroaniline       20 U         131-11-3Dimethylphthalate       5 U         208-96-8Acenaphthylene       5 U         606-20-22,6-Dintrotoluene       5 U         99-09-23-Nitroaniline       20 U	87-68-3 59-50-7 91-57-6 77-47-4 88-06-2	Hexachlorobutadiene4-Chloro-3-methylphenol2-MethylnaphthaleneHexachlorocyclopentadiene2,4,6-Trichlorophenol	5 5 5 5	บ บ บ
	91-58-7 88-74-4 131-11-3 208-96-8 606-20-2 99-09-2	2-Chloronaphthalane2-NitroanilineDimethylphthalateAcenaphthylene2,6-Dintrotoluene3-Nitroaniline	5 20 5 5 5 20	מ מ מ מ

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDPN2

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Date Received: 04/27/00 Lab Sample ID: 6033.015

Lab File ID: H1004 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

(1) - Cannot be separated from Dipherylamine



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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDPN5

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCF6

Date Received: 04/27/00

Lab Sample ID: 6033.006

Lab File ID: H0996

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q

	·	· · · · · · · · · · · · · · · · · · ·
   108-95-2Phenol	-	U
111-44-4bis(2-Chloroethyl)ether	5	Ū
95-57-82-Chlorophenol	5	Ū
95-48-72-Methylphenol	5	Ū
108-60-12,2'-oxybis(1-Chloropropane)	5	U
106-44-54-Methylphenol	5	Ū
621-64-7N-Nitroso-di-n-propylamine	5	İυ
67-72-1Hexachloroethane	5	ĺυ
98-95-3Nitrobenzene	5	ប
78-59-1Isophorone	5	ับ
88-75-52-Nitrophenol	5	Ū
105-67-92,4-Dimethylphenol	5	U
111-91-1bis(2-Chloroethoxy)methane	5	U
120-83-22,4-Dichlorophenol	5	U
91-20-3Naphthalene	5	U
106-47-84-Chloroaniline	5	U
87-68-3Hexachlorobutadiene	5	U
59-50-74-Chloro-3-methylphenol	5	U
91-57-62-Methylnaphthalene	! 5	U
77-47-4Hexachlorocyclopentadiene	5	U
88-06-22,4,6-Trichlorophenol	5	U
95-95-42,4,5-Trichlorophenol	20	U
91-58-72-Chloronaphthalane	5	U
88-74-42-Nitroaniline	20	U
131-11-3Dimethylphthalate	5	U
208-96-8Acenaphthylene	5	U
606-20-22,6-Dintrotoluene	5	U
99-09-23-Nitroaniline	20	U
83-32-9Acenaphthene	5	U
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

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EDPN5

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.006 Date Received: 04/27/00

Lab File ID: H0996 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

(1) - Cannot be separated from Diphenylamine

# lLCF

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

# TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPN5

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.006

Date Received: 04/27/00

Lab File ID: H0996

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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15				!
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17.				i
		<u> </u>		i
19.				i
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24.		!	<u> </u>	
25.			<u> </u>	
26.				
27.				i
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29.			ļ	i
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDPN6

Lab Name: PDP ANALYTICAL SERVICES

Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.007

Date Received: 04/27/00

Lab File ID: H0997

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL)

Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO.	COMPOUND	(ug/L)	Q
	Phenol bis(2-Chloroethyl)eth 2-Chlorophenol	ner	5 U 5 U 5 U

		i	i	i
	108-95-2Phenol	1 5	U	J 1
	111-44-4bis(2-Chloroethyl)ether	5	U	1
	95-57-82-Chlorophenol	<b>!</b> 5	U	1
	95-48-72-Methylphenol	<u> </u>	U	ŀ
	108-60-12,2'-oxybis(1-Chloropropane)	<u> </u>	U	1
	106-44-54-Methylphenol	5	U	!
	621-64-7N-Nitroso-di-n-propylamine	5	¦ Ŭ	1
	67-72-1Hexachloroethane	5	U	
	98-95-3Nitrobenzene	1 5	U	
	78-59-1Isophorone	<b>!</b> 5	U	1
	88-75-52-Nitrophenol	<u> </u>	U	
	105-67-92,4-Dimethylphenol	5	U	
	111-91-1bis(2-Chloroethoxy)methane	5	<b>!</b> ប	
į	120-83-22,4-Dichlorophenol	5	U	1
l	91-20-3Naphthalene	5 }	ן ט	i
1	106-47-84-Chloroaniline	<b> </b> 5	ប	ĺ
į	87-68-3Hexachlorobutadiene	5	U	i
1	59-50-74-Chloro-3-methylphenol	5	U !	
1	91-57-62-Methylnaphthalene	5	ן ט !	
l	77-47-4Hexachlorocyclopentadiene	5	U !	
	88-06-22,4,6-Trichlorophenol	5	ן טו	
	95-95-42,4,5-Trichlorophenol	20	U	ĺ
1	91-58-72-Chloronaphthalane	5	U !	
1	88-74-42-Nitroaniline	20	ָּט	
1	131-11-3Dimethylphthalate	5	U	į
l	208-96-8Acenaphthylene	5	U	ĺ
ļ	606-20-22,6-Dintrotoluene	5	U	
į	99-09-23-Nitroaniline	20	U	1
į	83-32-9Acenaphthene	5	U	i
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDPN6

Lab Name: PDP ANALYTICAL SERVICES

Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.007

Date Received: 04/27/00

Lab File ID: H0997

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL)

Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 84-74-2 129-00-0 85-68-7 91-94-1 17-81-7 117-84-0 117-84-0 205-99-2 207-08-9 50-32-8 193-39-5 53-70-3	2,4-Dinitrophenol4-Nitrophenol2,4-Dinitrotoluene2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenylether4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneDi-n-butylphthalateButylbenzylphthalateButylbenzylphthalateButylbenzylphthalateBenzo(a) anthracene	20 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	מממממממממממממממממממממ
1			i

(1) - Cannot be separated from Diphenylamine

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDPN6

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.007

Date Received: 04/27/00

Lab File ID: H0997

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1			<u> </u>	
2.		!		.!
3		!		- !
4				_ !
5				-
6			<u></u>	- !
7				-
8				- !
9	_		ļ	- ¦
10.				- ¦
11.		j	ļ- <del></del>	- }
12.			i	-
14.			<u> </u>	-
15.	_		İ	·
16.		<u> </u>		-
	-			-
17.			[	-
19.	-	-	<u> </u>	·
20.			<u> </u>	·
0.1	_		¦	-
22.		<del></del>	<u> </u>	·
23.		<u> </u>		\\
24.		-	<u> </u>	
25.		-		ii
26.	]	<u>}</u>	<u> </u>	
27.				ii
28.			<u> </u>	;
29.	-[	[		ii
30.				
		i		ii

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDPN7

Lab Name: PDP ANALYTICAL SERVICES

Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Date Received: 04/27/00

Lab Sample ID: 6033.008

Date Extracted: 05/01/00

Lab File ID: H0998

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Sample Volume: 1000 (mL)

CONCENTRATION CAS NO. COMPOUND (ug/L)

		(43/2/	¥
108-95-2	Phenol	5	U
	bis(2-Chloroethyl)ether	5	U
95-57-8	2-Chlorophenol	5	Ū
95-48-7	2-Methylphenol	5	U
	2,2'-oxybis(1-Chloropropane)	5	Ù
106-44-5	4-Methylphenol	5	Ū
	N-Nitroso-di-n-propylamine	5	ĺυ
67-72-1	Hexachloroethane	5	Ū
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	ĺυ
88-75-5	2-Nitrophenol	5	Ū
	2,4-Dimethylphenol	5	Ū
	bis(2-Chloroethoxy)methane		ĺυ
	2,4-Dichlorophenol	5	U
	Naphthalene	5	U
	4-Chloroaniline	5	U
	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalane	5	U
	2-Nitroaniline	20	U
	Dimethylphthalate	5	U
	Acenaphthylene	5	U
	2,6-Dintrotoluene	5	U
	3-Nitroaniline	20	U
	Acenaphthene	5	
	<u> </u>		

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

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EDPN7

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.008 Date Received: 04/27/00

Lab File ID: H0998 Date Extracted: 05/01/00

Sample Volume: 1000 (mL) Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
[		T	T
51-28-5	2,4-Dinitrophenol	20	U
100-02-7	4-Nitrophenol	20	U
	Dibenzofuran		U
121-14-2	2,4-Dinitrotoluene		U
84-66-2	Diethylphthalate	. ! 5	U
	4-Chlorophenyl-phenylether_	. 1 5	U
	Fluorene	.   5	U
	4-Nitroaniline	20	U
	4,6-Dinitro-2-methylphenol	20	U !
	N-Nitrosodiphenylamine (1)		U !
101-55-3	4-Bromophenyl-phenylether	5	U !
118-74-1	Hexachlorobenzene	1 5	ן טן
87-86-5	Pentachlorophenol	20	ן טן
85-01-8	Phenanthrene	1 5	U !
120-12-7	Anthracene		ן טן
84-74-2	Di-n-butylphthalate	5	ן ט
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	5	U
56-55-3	Benzo(a)anthracene	5	ן ט
	Chrysene	5	ט !
117-81-7	bis(2-Ethylhexyl)phthalate	2	J
117-84-0	Di-n-octylphthalate	5	ט ו
205-99-2	Benzo(b) fluoranthene	5	U
	Benzo(k)fluoranthene	5	ט ו
50-32-8	Benzo(a)pyrene		Ū
193-39-5	Indeno(1,2,3-cd)Pyrene	5	υİ
53-70-3	Dibenz(a,h)anthracene	5	
191-24-2	Benzo(g,h,i)perylene	5	•
	* * *	1	

(1) - Cannot be separated from Diphenylamine



## TENTATIVELY IDENTIFIED COMPOUNDS

EDPN7 Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCF6

Lab Sample ID: 6033.008

Date Received: 04/27/00

Lab File ID: H0998

Date Extracted: 05/01/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/11/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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8.		-		ļ
9. 10.	_	- <b> </b>		į
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10		-		<del> </del>
1.3		-		¦
1.4		- ]		<u> </u>
15.	_	·		!
16.		-		¦
17.		-		i ——
18.		· i		i
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# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	
SUBJECT:	Review of Data  Received for Review on 5-23-00
FROM:	Stephen L. Ostrodka, Chief (SMF-4J) fur Ittu Ottrodka Superfund Field Services Section  Midwal & Bygnuls 6/27/6:0
TO:	Data User: USEPA
We have reviewed the data for the following case:	
SITE NAME:	HIMCO LANDFILL (IN)
CASE NUMBER: 27986 SDG NUMBER: EACAO	
Number and Type of Samples: 17 (WATER)	
Sample Numbers: EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO, EDCGO,	
Laboratory:_	PDP Hrs for Review: 12
Following are our findings:	
the date are usuable and acceptation with the	
undefrications discilled in the attached invariatione	
Nichard Lagrid	
	v

CC: Cecilia Moore Region 5 TPO Mail Code: SM-5J Lockheed Martin Services Group Environmental Services & Technologies Region 5 536 South Clark Street #1050 Chicago, IL 60605 Telephone 312-353-8302 Facsimile 312-353-8307



Date: June 23, 2000

To: Richard Byvik, EPA WAM

From: W. Ira Wilson, ESAT Chemist

Thru: Ziyad Rajabi, ESAT Team Manager

Copies: W. Ira Wilson, ESAT Organic Group Leader

Jay Thakkar, ESAT Contract RPO

Ref:

TDF# 5207-1029

WA# 05-00-4-07

Contract # 68D60002

SUBJECT:

Organic Data Review for Case 27986; SDG # EDCG0. Volatile and

Semivolatile Analyses Using SOW OLC02.1(Low Conc. Analysis).

Attached is the deliverable for Case 27986, SDG EDCG0 of Volatile and Semivolatile analysis for seventeen (17) water samples. Included in the deliverable is the Manually prepare case narrative. If you have any question please feel free to contact Ira Wilson; 312/353-2947.

MW WIOGP VOCASVOC;

#### NARRATIVE

LABORATORY: PDP ANALYTICAL SRVs.

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SDG: EDCG0

CASE: 27986

SITE: HIMCO LANDFILL

This review covers seventeen (17) low concentration water samples, numbered EDCG0, EDCG2, EDCG4 through EDCG9, EDCH0, E00FA through E00FE, E00F8, E00F9 and E0057, were collected on 04/26 and 28/2000. The PDP Analytical Services, of Woodland, TX received the samples on 04/28/2000, in good condition. The samples were analyzed for low concentration VOAs and SVOAs. All samples were analyzed per CLP SOW OLCO2.1.

Laboratory Control Samples (LCS) Identified as VLCS96 and VLCS97 (VOA) and SLCS70 (SVOA) were analyzed in place of matrix spike/matrix spike duplicate (MS/MSD) samples.

The VOA samples were analyzed within the holding time of fourteen  $(\_4)$  days for preserved water samples and the SVOA samples were extracted within the required holding time of seven days. The analysis of the semivolatile extracts were performed within forty (40) days. Therefore, the results for the VOA and SVOA fractions are acceptable.

The reviewer's narrative and data qualifiers are noted in the following pages.

Reviewed by: W. Ira Wilson Lockheed Martin/ESAT

Date: \_\_June 16 , 2000

#### NARRATIVE

LABORATORY: PDP ANALYTICAL SRVs.

CASE: 27986

SDG: EDCG0

SITE: HIMCO LANDFILL

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Below is a summary of the out-of-control audits and the possible effect on the data for this case.

# 1. HOLDING TIME

This review covers seventeen (17) low concentration water samples, numbered EDCG0, EDCG2, EDCG4 through EDCG9, EDCH0, E00FA through E00FE, E00F8, E00F9 and E0057, were collected on 04/26 and 28/2000. The PDP Analytical Services, of Woodland, TX received the samples on 04/28/2000 in good condition. The samples were analyzed for low concentration VOAs and SVOAs. All samples were analyzed per CLP SOW OLCO2.1.

The VOA samples were analyzed within the holding time of fourteen (..4) days for preserved water samples; therefore, the results are acceptable.

The SVOA samples were extracted within the holding time of seven (7) days. The extracts were promptly analyzed within the required 40 days criteria. Therefore; the results are acceptable.

# 2. GC/MS TUNING AND GC PERFORMANCE

GC/MS tuning complied with the mass list and ion abundance criteria for BFB and DFTPP.

#### 3. CALIBRATION

Initial and continuing calibration standards of VOA and SVOA were evaluated for the Target Compounds List (TCL) and outliers were recorded on the outlier forms included as a part of this narrative.

#### 4. METHOD BLANK

Blanks VBLK96 and VBLK97 are the low concentration water Volatile Method Blanks. The Method Blanks were clean, no TCLs or TICs reported. Blank VHBLK01 is identified as a Holding Blank sample which was also clean.

Reviewed by: W. Ira Wilson\_Lockheed Martin/ESAT

Date: June 16 , 2000

#### NARRATIVE

LABORATORY: PDP ANALYTICAL SRVs.

Page# of 8

SDG: EDCG0

CASE: 27986

SITE: HIMCO LANDFILL

Blank SBLK39 is the low conc. water Semivolatile Method Blank. Blank SBLK39 reported no TCLs and no TICs.

Please refer to Form-IV LCV and Form-IV LCSV for a list of associated samples.

# 5. SURROGATE RECOVERY AND SYSTEM MONITORING COMPOUNDS

The low concentration recovery of the system monitoring spiking Compound (BFB = Bromofluorobenzene) for the volatile analysis and the surrogate compounds for the semivolatile analysis met the required QC limits for all samples; therefore, all results are acceptable.

#### 6. MATRIX SPIKE/MSD SAMPLES

A Laboratory Control (LCS) Samples identified as VLCS96 and VLCS97 (for volatiles) and SLCS70 (for semivolatiles) were used in place of a matrix spike/matrix spike duplicate sample for the low concentration analysis. All spike recoveries were within the QC limits; therefore, the results are acceptable.

### 7. FIELD BLANK AND FIELD DUPLICATE

No samples were identified as Trip Blanks, Field Blanks or Duplicates. Results are not qualified based upon the results of the Field Blanks or Duplicates.

#### 8. INTERNAL STANDARDS

The internal standard retention times and area counts for the low concentration volatile and semivolatile samples were within the required QC limits; therefore, the results are acceptable.

### 9. COMPOUND IDENTIFICATION

Target compounds and TICs were correctly identified by "best fit"

Reviewed by: W. Ira Wilson Lockheed Martin/ESAT

Date: June 16 , 2000

## NARRATIVE

LABORATORY: PDP ANALYTICAL SRVs.

Page 5 of \$

SDG: EDCG0

CASE: 27986

SITE: HIMCO LANDFILL

library search method.

# 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

VOA and SVOA Target Compounds (TCLs) and Tentative Identified Compounds (TICs) were properly quantitated; therefore, the results are acceptable.

# 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

GC baseline for pest/PCB analysis indicated acceptable performance.

# 12. ADDITIONAL INFORMATION

None.

Reviewed by: W. Ira Wilson Lockheed Martin/ESAT

Date: June 16 , 2000

# CALIBRATION OUTLIERS LOW CONCENTRATION WATER VOLATILE TCL COMPOUNDS

(page i of l)

Acetone 0.01 Caroon disulfide 0.01 1.1-Dichloroethene 0.10 1.1-Dichloroethene 0.20 cis-1.2-Dichloroethene 0.10 trans-1.2-Dichloroethene 0.10 Chiroform 0.20 1.2-Dichloroethene 0.10 2-Butanone 0.01 Bromochloromethane 0.05 1.1.1-Trichloroethane 0.10 Carbon tetrachlonde 0.10 Brmodichloromethane 0.20 1.2-Dichloropropane 0.01 cis-1.3-Dichloropropene 0.20 Trichloroethene 0.30 Dibromochloromethane 0.10 Enchloropropene 0.20 Trichloroethene 0.30 Dibromochloromethane 0.10 1.1.2-Inichloropropene 0.10 Benzene 0.40 trans-1.3-Dichloropropene 0.10 Bromoform 0.05 4-Methyl-2-Pentanone 0.01 Tetrachloroethene 0.01 Tetrachloroethene 0.01 Tetrachloroethene 0.01	4/25/	0i- 10 S	2 5/1	/ 0/ /% d	1028	54111	<b>2. – 2</b> ;	3.41	п	% <u></u> d		п	%d	T:
Chloromethane         0 01           Bromethane         0 10           Vinyl chlonde         0 10           Chloroethane         0 01           Methylene chloride         0 01           Acetone         0 01           Carbon disulfide         0 01           1.1-Dichloroethene         0 10           1.1-Dichloroethene         0 10           cis-1.2-Dichloroethene         0 10           Chiroform         0 20           1.2-Dichloroethane         0 10           2-Butanone         0 01           Bromochloromethane         0 05           1,1.1-Inchloroethane         0 10           Carbon tetrachlonde         0 10           Brmodichloromethane         0 20           1,2-Dichloropropane         0 01           cis-1,3-Dichloropropane         0 01           cis-1,3-Dichloropropane         0 10           1,1.2-trichloroethane         0 10           1,1.2-trichloroethane         0 10           30         0           Dibromochloromethane         0 10           1,1.2-trichloropropane         0 10           1,2-Dichloropethane         0 10           2-Hexanone         0 05		%rsd		%d		r r	%d		п	%d	-	त	%d	T:
Bromethane														1
Vinyl chionde         0.10           Chloroethane         0.01           Methylene chloride         0.01           Acetone         0.01           Caroon disulfide         0.01           1.1-Dichloroethene         0.10           1.1-Dichloroethene         0.20           cis-1.2-Dichloroethene         0.10           trans-1.2-Dichloroethene         0.10           Chiroform         0.20           1.2-Dichloroethane         0.01           2-Butanone         0.01           Bromochloromethane         0.10           Carbon tetrachlonde         0.10           Brmodichloromethane         0.20           1.2-Dichloropropane         0.01           cis-1.3-Dichloropropene         0.20           Trichloroethene         0.30           Dibromochloromethane         0.10           1.1.2-trichloroethane         0.10           8enzene         0.40           trans-1.3-Dichloropropene         0.05           4-Methyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1.2-Dibromoethane         0.10											1	j.		
Chioroethane         0.01           Methylene chloride         0.01           Acetone         0.01           Caroon disulfide         0.01           1,1-Dichloroethene         0.10           1,1-Dichloroethene         0.20           cis-1,2-Dichloroethene         0.10           trans-1,2-Dichloroethene         0.10           Chiroform         0.20           1,2-Dichloroethane         0.10           2-Butanone         0.01           Bromochloromethane         0.10           Carbon tetrachlonde         0.10           Brmodichloromethane         0.20           1,2-Dichloropropane         0.21           dis-1,3-Dichloropropene         0.20           Trichloroethene         0.30           Dibromochloromethane         0.10           1,1,2-Inchloropropene         0.10           1,1,2-Inchloropropene         0.10           4-Methyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1,2-Dibromoethane         0.10           1,2-Dibromoethane         0.10								j	1		1	1	1	
Methylene chloride         0.01           Acetone         0.01           Caroon disulfide         0.01           1.1-Dichloroethene         0.10           1.1-Dichloroethene         0.20           cis-1.2-Dichloroethene         0.10           trans-1.2-Dichloroethene         0.10           Chiroform         0.20           1.2-Dichloroethane         0.10           2-Butanone         0.01           Bromochloromethane         0.05           1.1.1-Trichloroethane         0.10           Brmodichloromethane         0.20           1.2-Dichloropropane         0.01           cis-1.3-Dichloropropene         0.20           Trichloroethene         0.30           Dibromochloromethane         0.10           1.1.2-Inchloroethane         0.10           Benzene         0.40           trans-1,3-Dichloropropene         0.10           3-Methyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1,1,2-Tetrachloroethane         0.10           2-Dibromoethane         0.10						1	1					I		
Acetone														
Carbon disulfide         0 01           1.1-Dichloroethene         0 10           1.1-Dichloroethene         0 10           1.1-Dichloroethene         0 10           cis-1.2-Dichloroethene         0 10           Chiroform         0.20           1.2-Dichloroethane         0 10           2-Butanone         0 01           Bromochloromethane         0 05           1.1.1-Trichloroethane         0 10           Carbon tetrachlonde         0 10           Brmodichloromethane         0.20           1.2-Dichloropropane         0.01           cis-1.3-Dichloropropene         0.20           Trichloroethene         0.30           Dibromochloromethane         0.10           1.1.2-trichloroethane         0.10           8erzene         0.40           trans-1.3-Dichloropropene         0.10           3-Metnyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1,2-Dibromoethane         0.10				-	ļ	L			ļ	<u> </u>	<del></del>	<u> </u>	<del></del>	
1.1-Dichloroethene         0.10           1.1-Dichloroethane         0.20           cis-1.2-Dichloroethene         0.10           trans-1.2-Dichloroethene         0.10           Chiroform         0.20           1.2-Dichloroethane         0.10           2-Butanone         0.01           Bromochloromethane         0.05           1.1.1-Trichloroethane         0.10           Carbon tetrachlonde         0.10           Brmodichloromethane         0.20           1.2-Dichloropropane         0.01           cis-1.3-Dichloropropene         0.20           Trichloroethene         0.30           Dibromochloromethane         0.10           1.1.2-trichloropropene         0.10           Errans-1.3-Dichloropropene         0.10           4-Metnyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1.1.2-Tetrachloroethane         0.10           1.2-Dibromoethane         0.10				+-			<u> </u>			<b>├</b>	<del> </del>	<del></del>	┼	↓
1,1-Dichloroethane         0.20           cis-1,2-Dichloroethene         0.10           trans-1,2-Dichloroethene         0.10           Chiroform         0.20           1,2-Dichloroethane         0.10           2-Butanone         0.01           Bromochloromethane         0.05           1,1,1-Trichloroethane         0.10           Carbon tetrachlonde         0.10           Brmodichloromethane         0.20           1,2-Dichloropropane         0.01           cis-1,3-Dichloropropene         0.30           Dibromochloromethane         0.10           1,1,2-trichloroethane         0.10           Benzene         0.40           trans-1,3-Dichloropropene         0.10           4-Metnyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1,2,2-Tetrachloroethane         0.10           1,2-Dibromoethane         0.10				- 1	4	<u> </u>			<b>.</b>	<b>├</b> ──	<del></del>	<del></del>	-	<b>├</b>
cis-1.2-Dichloroethene         0 10           trans-1.2-Dichloroethene         0 10           Chiroform         0.20           1.2-Dichloroethane         0 10           2-Butanone         0 01           Bromochloromethane         0 05           1.1.1-Trichloroethane         0 10           Carbon tetrachlonde         0 10           Brmodichloromethane         0 20           1.2-Dichloropropane         0 01           cis-1,3-Dichloropropene         0 20           Trichloroethene         0 30           Dibromochloromethane         0 10           1,1.2-trichloroethane         0 10           Berzene         0 40           trans-1,3-Dichloropropene         5           4-Metnyl-2-Pentanone         0 01           2-Hexanone         0 01           Tetrachloroethene         0 10           1,2,2-Tetrachloroethane         0 10           1,2-Dibromoethane         0 10					<u> </u>	ļ				<del> </del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>
trans-1.2-Dichloroethene         0 10           Chiroform         0.20           1.2-Dichloroethane         0.10           2-Butanone         0 01           Bromochloromethane         0 05           1,1.1-Trichloroethane         0 10           Carbon tetrachlonde         0 10           Brmodichloromethane         0.20           1,2-Dichloropropane         0.01           cis-1,3-Dichloropropene         0.20           Trichloroethene         0.30           Dibromochloromethane         0.10           1,1,2-trichloropropene         0.10           8enzene         0.40           trans-1,3-Dichloropropene         0.10           3-Methyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1,1,2,2-Tetrachloroethane         0.10           1,2-Dibromoethane         0.10			ı ı			<b></b>					<del></del>		┼	┼──
Chiroform         0.20           1.2-Dichloroethane         0.10           2-Butanone         0.01           Bromochloromethane         0.05           1,1.1-Trichloroethane         0.10           Carbon tetrachlonde         0.10           Brmodichloromethane         0.20           1,2-Dichloropropane         0.01           cis-1,3-Dichloropropene         0.20           Trichloroethene         0.30           Dibromochloromethane         0.10           1,1,2-trichloroethane         0.10           Benzene         0.40           trans-1,3-Dichloropropene         0.10           3-Methyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1,1,2,2-Tetrachloroethane         0.10           1,2-Dibromoethane         0.10					<del> </del>	<b> </b>			<b></b>		<del></del>	<del> </del>	<del> </del>	<del> </del>
1,2-Dichloroethane         0.10           2-Butanone         0.01           Bromochloromethane         0.05           1,1,1-Trichloroethane         0.10           Carbon tetrachlonde         0.10           Brmodichloromethane         0.20           1,2-Dichloropropane         0.01           cis-1,3-Dichloropropene         0.20           Trichloroethene         0.30           Dibromochloromethane         0.10           1,1,2-trichloroethane         0.10           Benzene         0.40           trans-1,3-Dichloropropene         0.10           3-Methyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1,1,2,2-Tetrachloroethane         0.10           1,2-Dibromoethane         0.10		1 1		+	<del> </del>	<u> </u>			<del> </del>	<del></del>	┼──	<del> </del>	<del> </del>	<del> </del>
2-Butanone         0.01           Bromochloromethane         0.05           1,1,1-Trichloroethane         0.10           Carbon tetrachlonde         0.10           Brmodichloromethane         0.20           1,2-Dichloropropane         0.01           cis-1,3-Dichloropropene         0.20           Trichloroethene         0.30           Dibromochloromethane         0.10           1,1,2-trichloroethane         0.10           Benzene         0.40           trans-1,3-Dichloropropene         0.10           Bromoform         0.05           4-Methyl-2-Pentanone         0.01           2-Hexanone         0.10           1,1,2,2-Tetrachloroethane         0.10           1,2-Dibromoethane         0.10					+	<del> </del>				<del></del>	+	<del>                                     </del>	┼	<del> </del>
Bromochloromethane         0 05           1,1,1-Trichloroethane         0 10           Carbon tetrachlonde         0 10           Brmodichloromethane         0.20           1,2-Dichloropropane         0.01           cis-1,3-Dichloropropene         0.20           Trichloroethene         0.30           Dibromochloromethane         0.10           1,1,2-trichloroethane         0.10           Benzene         0.40           trans-1,3-Dichloropropene         0.10           3-romoform         0.05           4-Methyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1,2,2-Tetrachloroethane         0.10           1,2-Dibromoethane         0.10		<del> </del>		+-	+	<del> </del>					<del> </del>	<del>                                     </del>	+	+
1,1,1-Trichloroethane         0.10           Carbon tetrachlonde         0.10           Brmodichloromethane         0.20           1,2-Dichloropropane         0.01           cis-1,3-Dichloropropene         0.20           Trichloroethene         0.30           Dibromochloromethane         0.10           1,1,2-trichloroethane         0.40           trans-1,3-Dichloropropene         0.40           trans-1,3-Dichloropropene         0.00           4-Methyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1,2,2-Tetrachloroethane         0.10           1,2-Dibromoethane         0.10	<del> </del>	<del>                                     </del>		+-	+	<del> </del>	<b></b>		<del> </del>		<del></del>	<del>                                     </del>	<del>                                     </del>	<del>                                     </del>
Carbon tetrachlonde         0 10           Brmodichloromethane         0.20           1.2-Dichloropropane         0.01           cis-1.3-Dichloropropene         0.20           Trichloroethene         0.30           Dibromochloromethane         0.10           1.1.2-trichloroethane         0.10           Benzene         0.40           trans-1.3-Dichloropropene         0.10           3-romoform         0.05           4-Methyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1.1.2.2-Tetrachloroethane         0.10           1.2-Dibromoethane         0.10	i				+	<del> </del>			<b></b>	<b></b>	1	<b>†</b>	†	
1,2-Dichloropropane         0.01           cis-1,3-Dichloropropene         0.20           Trichloroethene         0.30           Dibromochloromethane         0.10           1,1,2-trichloroethane         0.10           Benzene         0.40           trans-1,3-Dichloropropene         0.10           Bromoform         0.05           4-Methyl-2-Pentanone         0.01           2-Hexanone         0.10           1,1,2,2-Tetrachloroethane         0.10           1,2-Dibromoethane         0.10	t				1	<del>                                     </del>					1	T	1	
cis-1,3-Dichloropropene         0.20           Trichloroethene         0.30           Dibromochloromethane         0.10           1,1,2-trichloropthane         0.10           Benzene         0.40           trans-1,3-Dichloropropene         0.10           Bromoform         0.05           4-Methyl-2-Pentanone         0.01           Z-Hexanone         0.10           1,1,2,2-Tetrachloroethane         0.10           1,2-Dibromoethane         0.10														Τ -
Trichloroethene         0.30           Dibromochloromethane         0.10           1.1.2-trichloroethane         0.10           Benzene         0.40           trans-1.3-Dichloropropene         0.10           Bromoform         0.05           4-Methyl-2-Pentanone         0.01           2-Hexanone         0.10           1.1.2,2-Tetrachloroethane         0.10           1.2-Dibromoethane         0.10														T
Dibromochloromethane         0.10           1.1.2-trichloroethane         0.10           Benzene         0.40           trans-1.3-Dichloropropene         0.10           Bromoform         0.05           4-Methyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1.1.2.2-Tetrachloroethane         0.10           1.2-Dibromoethane         0.10														
1.1.2-trichloroethane         0.10           Benzene         0.40           trans-1.3-Dichloropropene         0.10           Bromoform         0.05           4-Methyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1.1.2,2-Tetrachloroethane         0.10           1.2-Dibromoethane         0.10														<u> </u>
Benzene         0.40           trans-1,3-Dichloropropene         0.10           Bromoform         0.05           4-Methyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1,1,2,2-Tetrachloroethane         0.10           1,2-Dibromoethane         0.10											1		<u> </u>	
trans-1,3-Dichloropropene         0.10           Bromoform         0.05           4-Methyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1,1,2,2-Tetrachloroethane         0.10           1,2-Dibromoethane         0.10											<del>  </del>	ļ	-	
Bromoform         0.05           4-Methyl-2-Pentanone         0.01           2-Hexanone         0.01           Tetrachloroethene         0.10           1,1,2,2-Tetrachloroethane         0.10           1,2-Dibromoethane         0.10		l									<del>                                     </del>	ļ	<del> </del>	
4-Metnyl-2-Pentanone       0.01         2-Hexanone       0.01         Tetrachloroethene       0.10         1.1.2.2-Tetrachloroethane       0.10         1.2-Dibromoethane       0.10	ļ	<b> </b>		_		2 2 2 2	A - 77	_	ļ		┼	ļ	<del> </del>	——
2-Hexanone         0.01           Tetrachioroethene         0.10           1.1.2.2-Tetrachioroethane         0.10           1.2-Dibromoethane         0.10	7,189		C18	5	<del> </del>	7.237	25.4		<u> </u>	<del> </del>	+	<del> </del>		
Tetrachioroethene 0.10 1.1.2.2-Tetrachioroethane 0.10 1.2-Dibromoethane 0.10		<del> </del>		+	<del></del>	ļ	-					<del> </del>	<del> </del>	₩
1.1.2.2-Tetrachloroethane 0.10 1.2-Dibromoethane 0.10	-	<del> </del>			-				ļ		┼	<del> </del>	<del> </del>	+
1,2-Dibromoethane 0 10		<del>  </del>		+	<del> </del>	<del>                                       </del>			<del> </del>	<del></del>	<del> </del>	<del> </del>	+	╁╾
	<del> </del>	<del>   </del>			-					<del></del>	<del> </del>	<del> </del>	+	<del> </del>
	<del>                                     </del>	<del> </del>		<del>                                     </del>	+	<del>                                     </del>					<del>†</del>	<u> </u>	<del>                                     </del>	<del>                                     </del>
Chlorobenzene 0.50					+	<del></del>					1		1	<del> </del>
Ethylbenzene 0 10				<del>                                     </del>		T							1	1
Styrene 0.30													Ī	
Xylene (total) 0.30					1									
1.2-Dibromo-3-chloropropane   0 10														
1.3-Dichlorobenzene 0.40					<u> </u>	<u> </u>			<u> </u>					↓
1,4-Dichlorobenzene 0.40						<u> </u>			<u> </u>	L				╽.
1.2-Dichlarobenzene 0.40		i				<u> </u>				ļ	<del></del>	<b></b>	<b></b>	<b>↓</b> -
1.2.4-Trichlorobenzene 0.40	ļ	<del>                                     </del>		-	↓	ļ			ļ	<b></b>	<b>↓</b>	<u> </u>	<del>  </del>	<del>                                     </del>
4-Bromofluorobenzene 0.20	1	·		l 	l .		}		l 	1	! 		·	
Samples affected:		<del></del>	VB	KY	76	UB	LKG	77_						
			VL	· CS	96	VL	CS 9	7_				<u> </u>		
			ED	C GC	).G-2	EDO	FA				_			
		<del>-</del>	ED	EG4	- GA	EDO EOO	FB							
			En	CHO	)	FOU	FD							
			E	DE	8	EDO	FC							
					7	E01	FE					1		
				OF	<u>,                                     </u>	1141	364	ρÍ			<del></del>	<b>†</b>		
			<del></del>		7	V 1. F	~~	<u> </u>	<b></b>			<del> </del>		

J/R= All positive results are estimated "J" and non-detected results are unusable "R"

\*• = These flags should be applied to the analytes on the sample data sheets

# = Minimum Relative Response Factor

# CALIBRATION OUTLIER LOW CONCENTRATION WATER SEMIVOLATILE TCL COMPOUNDS

Pz 7 of 8

(Page 1 of 2)

CASE\SAS#:	2	79	86	
COLUMN:		-		

LABORATORY: PDPAMALYTICA (
SITE NAME: NIHACO LAMBELLE

Instrument# #- 1+P5973	11	Initia	al Cal.		Cor	ntin. Cal			ntin. Ca		Co	ntin. Ca	<u>.l</u>	C	ontin. Ca	ıl.
Date/Time:	11	5/2/	00-10	<u>33</u>	15/12/1			15/14	100-15							_
	#	<u>rf</u>	%rsd		rf	%d	1 *	l rf	<u> 1 % d</u>	*	rf	<u>%</u> d	*	rf	<u>%</u> d	1
Phenol	0.80		<u></u>	<u></u>	1	1	1:	<u> </u>	1			<u>L</u>	1	1		1
bis(2-chloroethyl) Ether	0.70		1	<u></u>		1	1	1	1				1	1	1	1
2-Chlorophenol	0.70		<u> </u>	1		L	1		1			1	1	1	1	1
2-Methylphenol	[0.70]		<u> </u>		1	1	1	<u> </u>	1			<u> </u>	<u> </u>	1	1	
2,2'-Oxybis(1-chl-propane)	0.01					1	1	1	L				1	<u> </u>	<u> </u>	1
4-Methylphenol	0.60					1	1	1	1	1			1	<u> </u>		L
N-nitroso-di-n-propylamine	0.50				<u> </u>	<u> </u>	1		1				1		1	
Hexachloroethane	[0.30]		Ĺ	L			1	L	<u></u>	1_1		1	L		1	$\perp$
Nitrobenzene	0.20				L	1	1	<u> </u>	<u> </u>			<u></u>	1	<u> </u>		1
horone	0.40					<u> </u>	1		<u>L</u>				1	1	<u> </u>	L
2-Nitrophenol	0.10			L	1	<u> </u>	1		<u> </u>				1	L	1	1
2,4-Dimethylphenol	0.20			Ĺ	1	<u> </u>			<u></u>			L	L	<u></u>		1
bis-(2-chloroethoxyl)methane	0.30							L						L		
2,4-Dichlorophenol	0.20			Ĭ										1	1	Ī
1,2,4-Trichlerobenzene	0.20						L									I
Naphthalene	0.70				1	1	1		1			1	Ī	1		1
4-Chloroaniline	0.01	2366	l		W:361	i	Ī	0,219	26.6			1	I	1	1	ī
xachlorobutadiene	0.01	_	1	!	1	1	ī		Ī		_	1	Ī	!		1
hloro-3-methylphenol	10.20			<u> </u>		1	Ī	Ī	l	1 1		!	1	!	Ī	1
2-Methylnaphthalene	0.40			<u> </u>		1	1		Ī	1 1		ſ	1		1	ī
Hexachlorocyclopentadiene	0.01			Ī	1	ī	ī					1	1		Ī	Ī
2,4,6-Trichlorophenol	0.20			ŀ	i -	1	ī		1					1	Ī	1
2.4.5-Trichlorophenol	10.20		1	1	1	1	ī	1	}			\	Ī		1	1
2-Chloronaphthalene	0.80		1	ĺ	i i	İ	1	1	!			1	1	1	1	ī
2-Nitroaniline	0.01		!	!	Ī	!	ī		1				1	1	1	ī
Dimethyl phthlate	0.01		1	1	1	1	1	1	1			1	1	}	1	1
Arenaphthylene	1.30		1	!	1	!	1	1	1			!	Ī	1		1
Dinitrotoluene	0.20		!	Ī	1	1	î		1	1		1	i	1	1	Ī
3-Nitroaniline	10.01		!	1	1	!	1	i	1	1 1		1	1	1	1	Ť
Acenaphthene	10.30		<u> </u>	1	1	<del></del>	1	<u> </u>	1	1			<del>                                     </del>	i	1	i
2,4-Dinitrophenol	0.01	0.1011	WK 7	7	12.147	140.7	IT	0.153	144.5	丁		<u> </u>	<del>i</del>		1	ì
4-Nitrophenol	10.01	2 7 2 2	45.7	<u>  • •                                  </u>	10 207	175.2	IT	h 734	1424	15		1	ī	<del>i</del>	1	1
Dibenzofuran	0.80		<del>.</del>	<del> </del>	1		<del>132</del> .	1	1			<u> </u>	<del></del> -	<del> </del>	†	Ť
2,4-Dinitrotoluene	10.20		<del>                                     </del>	1	1	1	+	1	1	1		!	<del>                                     </del>	<del></del>	1	+-
2, Duni otoliche	10.201		<u> </u>	<u> </u>	15B1	1/30	<del></del>	FOO	EB			<u> </u>	1	1	<del></del>	1
Affected samples:	1_				15/.0	C 11		1500			/ 1			<del>                                     </del>		
refrected samples.	!-			_	1 = DC	$C = C \setminus I$			مت	_W	1	. / -		<del></del>		
	\				FOC	11-0	9	FOO	FE		<del></del>	400		<del></del>		_
	! !				EOD	ÉK		, <u>≠ 2212</u> 						<del></del>		
	ļ I				FOO	F-4		<u>.                                    </u>						<u></u>	<del></del>	
	\ 				E 01	EA		I						<del> </del>		
					IF UI	/ F /7		1		i				1		

Reviewer's Init/Date: 6/1/2

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

These flags should be applied to the analytes on the sample data sheets.

<sup># =</sup> Minimum Relative Response Factor

# CALIBRATION OUTLIER LOW CONCENTRATION WATER SEMIVOLATILE TCL COMPOUNDS (Page 2 of 2)

MES as

0/	` •	-,	222
CASE/SAS#: 27986			LABORATORY: DO ANAL VICE
COLUMN:			SITE NAME: HILLO LANDI

Instrument# #-HP5973						tin. Cal.		C	ntin. Ca	<u>1</u>	Co	ontin. Ca	1.	C <sub>0</sub>	ntin. Ca	1.
Date/Time:		5/2/0	20-10	33	5/17c	- 0001		5/140	w-150	24				<u> </u>		
	#	rf		*		%d			%d		rf	] %d	*	rf	<b>%</b> d	1
Diethylphthalate	0.01			<u> </u>	<u> </u>			<u> </u>	1			1			1	
4-Chlorophenyl-phenylether	0.40			L		L	<u> </u>		1			1				L
Fluorene	10.90			L	L	<u> </u>	<u> </u>	<u> </u>	1			1	1		l	L
4-Nitroaniline	0.01			İ				<u>L</u>	1			1			1	1
4,6-Dinitro-2-methylphenol	0.01			1	L				1			1			<u> </u>	_
N-nitrosodiphenylamine	0.01			L	<u> </u>		<u> </u>		1	$\sqcup$ 1					<u> </u>	1
4-Bromophenyl-phenylether	0.10			L	I			L	1			1			<u> </u>	1
Hexachlorobenzene	0.10			1	1		L		1				لــــــــــــــــــــــــــــــــــــــ		l	1
Pentachlorophenol	0.05					1			1			1	لتسا		1	Ī
Phenanthrene	0.70								L				1		<u> </u>	1
Anthracene	[0.70]			1					1	1 1		1			1	1
Di-n-butylphthalate	0.01			Ī				l				Ī	1 1			Ī
Fluoranthene	0.60			l				1	Ī	Ĺ		1			L	1
Pyrene	[0.60]	-		1				l	1			İ				
Butylbenzylphthalate	[0.01]			I	1				1			1				L
3,3'-Dichlorobenzidine	10.01	2360		1	0297	1	1	0,185	48.7	12		1				1
Benzo(a)anthracene	[0.80]			1				L		1 1		1				Ī
Chrysene	[0.70]			<u> </u>	1			1		1 1		<u> </u>			l	L
bis(2-Ethylhexyl)phthalate	0.01			1					1			1	L			Ĺ
Di-n-octyl phthalate	0.01			1	1	I	1	ł	1			1	L1		L	1
Benzo(b)fluoranthene	[0.70]			1	L	Ī		1	Ī						L	1
Benzo(k)fluoranthene	[0.70]			1	1		L	l	1			1				1
Benzo(a)pyrene	[0.70]			1	1	ł	L	1	1	1 1		Ī			1	Ī
Indeno(1,2,3-cd)pyrene	[0.50]			1	1	i		Ĺ	1			1			f	1
Dibenz(a,h)anthrancene	0.40				1											Ī
Benzo(g,h,i)perylene	0.50			1	1	t	1	[	1	1 1			Ī		1	1
	1 1			1	!	1	Ī		1	1		1	1		1	Ī
Nitrobenzene-d5	0.01		1	Ī	!	Ī	Ī	1	1			1			1	1
2-Fluorobiphenyl	0.70		1	Ī	]	1	ĺ	i	i			1			Ī	1
Terphenyl-d14	10.50		<u> </u>	1	1	1	1	1	Ī	1 1			1		1	Ī
Phenol-d5	0.80			ī	1	i	i	1	i	1 1		1			i	ī
2-Fluorophenol	0.60			i	1	Ī	1	1	1		····	1	Ī		ī	ī
2,4,6-Tribromophenol	0.01			<del></del>	i	1	1	1	1	1 1		1	1		1	1

Reviewer's Init/Date:

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

• = These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

ESAT-5-022.3 1/95

# ORGANIC DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature used in this document, the following code letters and associated definitions are provided:

**VALUE** - when/if the result of a value is greater than or equal to the Contract Required Quantitation Limit (CRQL).

- U Indicates that the compound was analyzed for, but not detected. The sample quantitation limit corrected for dilution and percent moisture is reported.
- J Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound where the result is less than the sample quantitation limit, but greater than zero. The flag is also used to indicate a reported result having an associated QC problem.
- R Indicates the data are unusable. (NOTE: The analyte may or may not be present.)
- N Indicates presumptive evidence of a compound. This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search.
- P Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns. The lower of the two results is reported.
- C Indicates pesticide results that have been confirmed by GC/MS.
- B Indicates the analyte is detected in the associated blank as well as in the sample.
- E Indicates compounds whose concentrations exceed the calibration range of the instrument.
- D Indicates an identified compound in an analysis has been diluted. This flag alerts the data user to any differences between the concentrations reported in the two analysis.
- A Indicates tentatively identified compounds that are suspected to be aldol condensation products.
- G Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method.
- L Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method.
- T Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample.
- X,Y,Z are reserved for laboratory defined flags.

				_			Org	anic Traffi	ic Repor	t	SDG	No.	Case No.		
₩E	PA	Unite	ed States Con	s Environ itract Lab	mental Prote oratory Prog	ction Agency ram	& Cha	in of Custor or Organic CLF	ody Řec	ord				. (	
1. Matrix		2	. Prese	rvative	3 R	egion No Sar	npling Co.		Dale Shipp	ed Carrier	<del></del>		7. Date Receive	ed-Receiv	ved by:
(Enter in Column A)		1	(Enter a	i Di	£ .	<u> </u>	100 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1 (100 ) 1		1 1 1 1				4-28-0		Mor Fin
,				7	Samp	oler (Name)	i		rbill Number		- 11 1		Laboratory Cont		Unit Price
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EPA Form 9110-2 (2/99)

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Distribution Blue - F White -	Region Copy Lab Copy fo	r Relum l	to SMO	Pink - SMO ( rellow - Lab	Copy Copy for Return									Additional Sta	andard Instructions

EPA Form 9110-2 (2/99)

	V4.30			_			Org	anic Traffi	c Repr⁻	ı	SDG No.	Case No.		1 1 1 N
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y		-				ler (Name)	. 1		bill Number			Laboratory Conf		nit Price 525 × 30
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Relinquished b	y (Signati	ure)		Da	te / Time	Received for (Signature)	or Laboratory	by: Fricin	Date 4 -28 -ce	/ Time Remarks	s: Is custody seal intact	MN/none Casc 500	127	986 DCGO
"istribution Blue -	Region Copy	- D-1		Pink - SMO	Copy for Return					,		See Reverse for A	\dditional S	tandard Instructions

\*See Reverse for Purpose Code Definitions CLASS 93 002

<b>%E</b> l	PΑ	Unite	ed States Con	Environi tract Lab	mental P oratory F	rolection Program	n Agency 1	Org & Cha (Fo	anic Traffic in of Custo r Organic CLP	Report dy Reco Analysis)	ord	SDG No.	ļ		7 3	
1. Matrix (Enter in Column A)		2	Preser Enfet in Column		1		on No Sam (Name)	pling Co. 1		Date Shippe	ed Carrier			Date Received イー <b>ユターの</b> o aboratory Contra	Ca act No. I	Nor Price
1. Surface V	Nater		1. HC	1	·		1 1	1. 54			3480446	l		68-D7-0	Yook	525
2. Ground V 3. Leachate 4. Field QC	Vater		2. HN 3. Nal 4. H2	03 4SO4	S	amplen	Signature	111/61	6.	Ship To:	1.78.32 17.15.17.2	wat will		Transfer to:		Date Received
5. Soil/Sedi 6. PE-water 7. PE-soil	ment		5. Ice 6. CH	only	4	Durne	co** Far	ly Action	ng Term		a Order		Re	eceived by:		
8. Other (spe			in (	Column E Preserve	)	Lead SF PF S1 B2	D _	REM RI SI ESI	RIFS RD RA O&M	ATTN:	Commence to		57 C	ontract Number		Price
CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other	B Conc Low Med	C Sample Type Comp / Grab	vative	TA (circle o PR* 7 (	nej 14- 21 Pi	E AS Analysis TA (circle one) R* 7 14 21 BNA	TA (circle one) PR* 7 14 21 Pest/ PCB	Regional S Tracking N or Tag Nu	Specific lumber	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	CLF	I responding P Inorganic ample No.	J Sample Initials	
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Shipment for Ca Complete? (Y/	- ا	Pag of	!B		SD Requ	ired? Required?	Y/N / Sam Y/N / Sam Y/N / Sam	ple #: ple #:			Additional Sampler Sign		Chain o	of Cuslody Seal	Number	(s)
*PR provides 7-c for preliminary re					orelimina	ry resu	lts. Reques	s	Chain of C	ustody	Record	•				
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Relinquished by		ıre)		<u></u>	te / Time	•	Received for (Signature)	Laboratory	Livi	Date 4 - 29 - 60	Time Remarks	Is custody seal intact		506:	ED	(60
Distribution Blue - F White -	Region Copy Lab Cop⊬fo	r Return	to SMO	Pink - SMO Yellow - Lat	Copy Copy for I	Return to	Region	á						e Reverse for Ad iee Reverse for		Standard Instructions

\*\*See Reverse for Purpose Code Def

and made

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Contract No. 68-D7-0004 Case No. 27986 SDG No. EDCG0

# **SDG NARRATIVE**

MAY 2 3 2000

# **SAMPLE RECEIPT:**

04/28/00 @ 09:48 A.M. - Received two shipments consisting of two coolers:Cooler 1 temperature : 4°C. Cooler 2 temperature : 3°C. (COC391529, COC391561, COC391574, COC391573)contained the following:

EDCG0 - 2-1L amber, 3-40mL Voa Vials.

EDCH0 - 2-40mL Voa Vials.

CG2 - 2-1L amber, 3-40mL Voa Vials.

EÜCG4 - 2-1L amber, 3-40mL Voa Vials.

EDCG5 - 2-1L amber, 3-40mL Voa Vials.

EDCG6 - 2-1L amber, 3-40mL Voa Vials.

EDCG7 - 2-1L amber, 3-40mL Voa Vials.

E0057 - 2-1L amber, 3-40mL Voa Vials.

FDCG8 - 2-1L amber, 3-40mL Voa Vials.

CG9 - 2-1L amber, 3-40mL Voa Vials.

E00F8 - 2-1L amber, 3-40mL Voa Vials.

E00F9 - 2-1L amber, 3-40mL Voa Vials.

E00FA - 2-1L amber, 3-40mL Voa Vials.

E0057 was labeled on containers as E00F7.

No other problems were encountered during sample receipt.

04/29/00 @ 09:14 A.M. - Received one shipments consisting of two coolers:Cooler 1 temperature : 4°C. Cooler 2 temperature : 4°C. (COC391531)contained the following:

E00FB - 2-1L amber, 3-40mL Voa Vials.

E00FD - 2-40mL Voa Vials.

E00FC - 2-1L amber, 3-40mL Voa Vials.

E00FE - 2-1L amber, 3-40mL Voa Vials.

No other problems were encountered during sample receipt.

# **VOLATILES:**

All samples were analyzed on a HP 5973 GC/MS using a 60 meters long DB-624 column having a 0.53mm ID and film thickness. The trap used was a OV-1/Tenax/Silica Gel (Tekmar #6. Cat 14-1755-003). A 20 mL purge was used for all samples, blanks and standards. The concentrations of the standards and spikes were maintained at the levels required by the Statement of Work (SOW).

The following field samples are analyzed for volatiles in this SDG. The pH of the samples is listed against them.

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	Contract No. 68-D7-0004		Case No. 27986	SDG No. EDCG0
		SDO	G NARRATIVE	
EDCG0 EDCG2 EDCG4 EDCG5 EDCG6 EDCG7 EDCG8	2.0 2.0 2.0 2.0 2.0 2.0 2.0	E00F8 E0057 E00F9 E00FA E00FB E00FD E00FC	2.0 2.0 2.0 2.0 2.0 2.0 2.0	
EDCG9 EDCH0	2.0 2.0	E00FE	2.0	

Manual integration's were performed for the following samples for the compounds listed against them.

VSTD00160 – Chloromethane, Vinyl Chloride, Bromomethane, Chloroethane, 1,1-Dichloroethene, Carbon Disulfide, Acetone, Methylene Chloride, cis-1,2-Dichloroethene, 1,2-Dichloroethane, 1,1,1-Trichloroethane, Carbon Tetrachloride, 1,1,2-Trichloroethane, 1,2-Dibromo-3-chloropropane.

VSTD00260 – Chloromethane, Vinyl Chloride, Bromomethane, Chloroethane, 1,1-Dichloroethene, Carbon Disulfide, Acetone, Methylene Chloride, 1,1,1-Trichloroethane, Carbon Tetrachloride, 1,2-Dibromo-3-chloropropane.

VSTD00560 – Chloromethane, Vinyl Chloride, Bromomethane, Chloroethane, 1,1-Dichloroethene, Carbon Disulfide, Acetone, Methylene Chloride, Bromochloromethane, 1,1,1-Trichloroethane, Carbon Tetrachloride, 1,2-Dibromo-3-chloropropane.

VSTD01060 – Chloromethane, Vinyl Chloride, Bromomethane, Chloroethane, 1,1-Dichloroethene, Carbon Disulfide, Acetone, Methylene Chloride, 1,1-Trichloroethane, Carbon Tetrachloride, 1,2-Dibromo-3-chloropropane.

VSTD02560 – Chloromethane, Vinyl Chloride, Bromomethane, Chloroethane, 1,1-Dichloroethene, Carbon Disulfide, Methylene Chloride, 1,1,1-Trichloroethane, 1,2-Dibromo-3-chloropropane.

VSTD00566 – Chloromethane, Vinyl Chloride, Bromomethane, Chloroethane, 1,1-Dichloroethene, Carbon Disulfide, Acetone, Methylene Chloride, Carbon Tetrachloride, 1,2-Dibromo-3-chloropropane.

VSTD00567 – Chloromethane, Vinyl Chloride, Bromomethane, Chloroethane, 1,1-Dichloroethene, Carbon Disulfide, Acetone, 1,1,1-Trichloroethane, Carbon Tetrachloride, 1,2-Dibromo-3-chloropropane.

VLCS96 - Vinyl Chloride.

VLCS97 - Vinyl Chloride.

E0057 – Methylene Chloride.

E00FD - Methylene Chloride.

EDCH0 - Carbon disulfide, Acetone, Methylene Chloride.

These manual integration's were necessary because the software failed to accurately integrate the entire peak. In all the above instances, the quantitation reports are flagged with "m". A hard copy printout of the manual integration's along with the scan ranges and initials of the operator is included in the data package. For those target compounds with low signals that required a manual search for the initial calibration, the analysts has performed the same manual search for every sample analysis to ensure that false negative results are not

1680 Lake Front Circle, Suite B • The Woodlands, TX 77380 • Phone (281)363-2233

Contract No. 68-D7-0004 Case No. 27986 SDG No. EDCG0

# **SDG NARRATIVE**

reported. All peaks in the calibration standards, samples and QC samples are checked manually to ensure that the software has correctly identified and integrated the peaks.

No problems were encountered during sample analysis.

# **SEMIVOLATILES:**

The following samples were extracted using continuous liquid/liquid extraction method on 05/03/00

EDCG0, EDCG2, EDCG4, EDCG5, EDCG6, EDCG7, EDCG8, EDCG9, E00F8, E00F9, E00FA, E00FB, E00FC, E00FE

All samples were analyzed on a HP 5971A GC/MS using a 30 meters long and 0.25mm ID DB-5 column . A 2uL injection was used.

Manual integration's were performed for the following samples for the compounds listed against them.

SSTD00502 – Indeno(1,2,3-cd)pyrene.

SSTD01002 – Indeno(1,2,3-cd)pyrene.

SSTD02002 – Indeno(1,2,3-cd)pyrene. SSTD05002 – Indeno(1,2,3-cd)pyrene.

SSTD08002 – Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene.

SSTD02009 – 2,2'-oxybis(1-Chloropropane).

SSTD02010 – 2,2'-oxybis(1-Chloropropane), 4-Chloroaniline, Indeno(1,2,3-cd)pyrene.

These manual integration's were necessary because the software failed to accurately integrate the entire peak. In all the above instances, the quantitation reports are flagged with "m". A hard copy printout of the manual integration's along with the scan ranges and initials of the operator is included in the data package. For those target compounds with low signals that required a manual search for the initial calibration, the analysts has performed the same manual search for every sample analysis to ensure that false negative results are not reported. All peaks in the calibration standards, samples and QC samples are checked manually to ensure that the software has correctly identified and integrated the peaks.

No problems were encountered during sample extraction and sample analysis.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature:

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		<u> </u>
Contract No. 68-D7-0004	Case No. 27986	SDG No. EDCG0

# **SDG NARRATIVE**

Chalesharano / Octoordinator

Date of Signature

Z:\NETDATA\QA\FORMS\CLP\NARR1296.DOC

# 2LCA LOW CONC. WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

	EPA	BFB	OTHER	TOT
	SAMPLE NO.	REC #		OUT
	_========	=====	======	===
01	VBLK96	108	_	0
02	VLCS96	111		l ol
03	EDCGO	110		0;
04	EDCG2	109		l ol
05	EDCG4	112		l o¦
06	EDCG5	114		l of
07	EDCG6	112		o¦
08	EDCG7	112		o¦
09	EDCG8	111		0
10	EDCG9	113		0
11	EDCH0	115		0
12	E00F8	114		0;
	E0057	113		0
14	E00F9	115		0
15	VBLK97	108		o¦
16	VLCS97	106		0
17	EOOFA	108		0
18	EOOFB	108	 	0;
19	EOOFD	110		0
20¦	EOOFC	108		0
21	VIBLK01	108		0
	EOOFE	111	·	0;
23	VHBLK01	109		0
24	 	<u></u>	 	·
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QC LIMITS %REC BFB = Bromofluorobenzene (80-120)

<sup>#</sup> Column to be used to flag recovery values
\* Values outside of contract required QC limits

LOW CONC. WATER VOLATILE LAB CONTROL SAMPLE RECOVERY

EPA SAMPLE NO.

VLCS96

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCGO

Lab Sample ID: GVLCS060

LCS Lot No.: 60

Lab File ID: G0925

Date Analyzed: 05/01/00

Purge Volume: 20.0

(mL)

Dilution Factor: 1.0

LCS Aliquot: 10.0 (uL)

	AMOUNT	AMOUNT		
	ADDED	RECOVERED		QC
COMPOUND	(ng)	(ng)	%REC #	LIMITS
=======================================	=======	=========	=====	=====
Vinyl chloride	100	81	81	60-140
1,2-Dichloroethane	100	104	104	60-140
Carbon tetrachloride	100	90	90	60-140
1,2-Dichloropropane	100	93	93	60-140
Trichloroethene	100	94	94	60-140
1,1,2-Trichloroethane	100	90	90	60-140
Benzene	100	<del> </del> 95	95	60-140
cis-1,3-Dichloropropene	100	90	90	60-140
Bromoform	100	85	85	60-140
Tetrachloroethene	100	¦ 87	87	60-140
1,2-Dibromoethane	100	81	81	60-140
1,4-Dichlorobenzene	100	77	77	60-140
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LCS Recovery: 0 outside limits out of 12 total.

COMMENTS:					
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		 	······································		

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

<sup>\*</sup> Values outside of QC limits.

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE LAB CONTROL SAMPLE RECOVERY

VLCS97

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: GVLCS061

LCS Lot No.: 60

Lab File ID: G0942

Date Analyzed: 05/02/00

Purge Volume: 20.0 (mL)

Dilution Factor: 1.0

LCS Aliquot: 10.0 (uL)

COMPOUND	AMOUNT ADDED (ng)	AMOUNT RECOVERED (ng)	%REC #	QC LIMITS
Vinyl chloride	100	! 80	80	60-140
1,2-Dichloroethane	100	97	97	60-140
Carbon tetrachloride	100	86	86	60-140
1,2-Dichloropropane	100	87	87	60-140
Trichloroethene	100	88	88	60-140
1,1,2-Trichloroethane	100	85	85	60-140
Benzene	100	94	94	60-140
cis-1,3-Dichloropropene	100	82	82	60-140
Bromoform	100	71	71	60-140
Tetrachloroethene	100	84	84	60-140
1,2-Dibromoethane	100	74	74	60-140
1,4-Dichlorobenzene	100	69	69	60-140
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LCS Recovery: 0 outside limits out of 12 total.

COMMENTS:	

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

<sup>\*</sup> Values outside of QC limits.

# 4LCA LOW CONC. WATER VOLATILE METHOD BLANK SUMMARY

VBLK96

Lab	Name:	PDP	ANALYTICAL	SERVICES	C	ontract:	68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCGO

Lab Sample ID: GVBLK060 Date Analyzed: 05/01/00

Lab File ID: G0924 Time Analyzed: 1115

Instrument ID: G-HP5973

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

# THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

	EPA	LAB	LAB	TIME
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
	=========		====================================	========
01	VLCS96	GVLCS060	G0925	1203
02	EDCG0	6040.002	G0926	1251
03	EDCG2	6040.004	G0927	1338
04	EDCG4	6040.005	G0928	1426
05	EDCG5	6040.006	G0929	1513
06	EDCG6	6040.007	G0930	1601
07	EDCG7	6040.008	G0931	1648
80	EDCG8	6040.010	G0932	1735
09	EDCG9	6040.011	G0933	1823
10	•	6040.003	G0934	1911
11	E00F8	6040.012	G0935	1958
12	E0057	6040.009	G0936	2046
13	E00F9	6040.013	¦G0937	2133
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COMMENTS:	

EPA SAMPLE NO.

# TOM CONC: MATER VOLATILE METHOD BLANK SUMMARY

ontract: 68-D7-0004

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: EDCG0

rsp Ssmple ID: GVBLK061

Date Analyzed: 05/02/00

Time Analyzed: 0028

Lab File ID: G0941

THIS WETHOD BLAUK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

Instrument ID: G-HP5973

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

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₱TTO 	G0942	GAPGZ061	APC837
YNYFXSED	LIFE ID	SYMBRE ID	SAMPLE NO.
LIWE	BA.I	AAJ TIGWAD	AGE SPA

COWWENTS:

page 1 of 1

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK96

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Date Received: \_\_\_\_\_ Lab Sample ID: GVBLK060

Date Analyzed: 05/01/00 Lab File ID: G0924

Purge Volume: 20 (mL) Dilution Factor: 1.0

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	1	U
	Bromomethane	• :	Ū
75-01-4	Vinyl chloride		U
75-00-3	Chloroethane	. :	Ū
	Methylene chloride	- 1	Ū
67-64-1		• :	Ū
	Carbon disulfide		Ū
	1,1-Dichloroethene	1	U
	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	ប
67-66-3	Chloroform	1	[ប
107-06-2	1,2-Dichloroethane	1	U
78-93-3	2-Butanone	·	U
74-97-5	Bromochloromethane	1	U
	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	ប
75-27-4	Bromodichloromethane	1	υ
78-87-5	1,2-Dichloropropane		ប
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	1	U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2		1	U
	trans-1,3-Dichloropropene	1	U
75-25-2		1	U
	4-Methyl-2-pentanone	5	U
	2-Hexanone	1 5	U
127-18-4	Tetrachloroethene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-88-3	Toluene	1	U
108-90-7	Chlorobenzene		U
100-41-4	Ethylbenzene	1	U
100-42-5	Styrene	_	U
	Xylenes (total)		U
	1,3-Dichlorobenzene		U
	1,4-Dichlorobenzene		U
	1,2-Dichlorobenzene		U
96-12-8	1,2-Dibromo-3-chloropropane_	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
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## 1LCE

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

VBLK96

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCGO

Lab Sample ID: GVBLK060

Date Received: \_\_\_\_\_

Lab File ID: G0924

Date Analyzed: 05/01/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK97

CONCENTRATION

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: GVBLK061 Date Received:

Lab File ID: G0941 Date Analyzed: 05/02/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	1	U
	Bromomethane	1	ĺυ
	Vinyl chloride	1	U
	Chloroethane	1	U
	Methylene chloride	2	U
	Acetone	5	U
	Carbon disulfide	1	U
	1,1-Dichloroethene	1	U
	1,1-Dichloroethane	1	U
	cis-1,2-Dichloroethene	1	U
	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
	1,2-Dichloroethane	1	U
	2-Butanone	5	U
	Bromochloromethane	1	U
	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	1	Ū
	1,2-Dichloropropane	1	U
10061-01-5-	cis-1,3-Dichloropropene	1	Ū
79-01-6	Trichloroethene	:	U
124-48-1	Dibromochloromethane	1	Ū
	1,1,2-Trichloroethane	i	Ū
	Benzene	1	U
	trans-1,3-Dichloropropene	1	U
	Bromoform	i .	ĺυ
	4-Methyl-2-pentanone	5	U
	2-Hexanone	5	U
	Tetrachloroethene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
106-93-4	1,2-Dibromoethane	1	ĺυ
108-88-3	Toluene	1	U
	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	Ū
100-42-5	Styrene	1	Ū
	Xylenes (total)	1	Ū
541-73-1	1,3-Dichlorobenzene	1	U
	1,4-Dichlorobenzene	1	Ū
	1,2-Dichlorobenzene	1	Ū
	1,2-Dibromo-3-chloropropane	-	Ū
	1,2,4-Trichlorobenzene		Ū
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#### 1LCE

EPA SAMPLE'NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

VBLK97

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCG0

Lab Sample ID: GVBLK061

Date Received: \_\_\_\_

Lab File ID: G0941

Date Analyzed: 05/02/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

GC Column: DB-624

ID: 0.53 (mm) Length: 60 (m)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHBLK01

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCGO

Lab Sample ID: 6040.001 Date Received: 04/28/00

Lab File ID: G0950 Date Analyzed: 05/02/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
	Bromomethane		Ū
	Vinyl chloride		Ū
	Chloroethane	• 1	Ū
	Methylene chloride	• I	U
67-64-1		• I	ָוֹ <u></u> דֹ
	Carbon disulfide	• :	İŪİ
	1,1-Dichloroethene		Ū i
75-34-3	1,1-Dichloroethane	• [	U i
	cis-1,2-Dichloroethene		וֹ עוֹ
	trans-1,2-Dichloroethene		ŪΪ
	Chloroform		ָנֹים i
	1,2-Dichloroethane		וֹ עוֹ
	2-Butanone	• -	U
	Bromochloromethane	· [	Ū
71-55-6	1,1,1-Trichloroethane		ט ו
56-23-5	Carbon tetrachloride		וֹט וֹ
75-27-4	Bromodichloromethane		U
78-87-5	1,2-Dichloropropane		บ
10061-01-5	cis-1,3-Dichloropropene		Ū
79-01-6	Trichloroethene		บ
	Dibromochloromethane		ĺυ
	1,1,2-Trichloroethane	. :	์ บ
71-43-2		· I	Ū
	trans-1,3-Dichloropropene	. :	Ū
	Bromoform	· 1	Ū
	4-Methyl-2-pentanone	• 1	Ŭ
	2-Hexanone	. 1	Ū
	Tetrachloroethene	· •	บั
	1,1,2,2-Tetrachloroethane	• 🗼	บ
106-93-4	1,2-Dibromoethane		Ū
108-88-3			Ū
	Chlorobenzene		Ū
	Ethylbenzene		บี
100-42-5		• .	Ü
	Xylenes (total)	• 1	U
	1,3-Dichlorobenzene	• _	Ū
	1,4-Dichlorobenzene		Ū
	1,2-Dichlorobenzene	٠ ـ	Ū
	1,2-Dibromo-3-chloropropane	•	U
	1,2,4-Trichlorobenzene		U
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# 1LCE

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

VHBLK01

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.001

Date Received: 04/28/00

Lab File ID: G0950

Date Analyzed: 05/02/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624

ID: 0.53 (mm) Length: 60 (m)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q =====
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0057

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.009 Date Received: 04/28/00

Lab File ID: G0936 Date Analyzed: 05/01/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
	Chloromethane	1	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
	Chloroethane	_ •	U
75-09-2	Methylene chloride	0.6	<b> </b> J
67-64-1		5	ט
	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene		ן ט
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene		ן ט
156-60-5	trans-1,2-Dichloroethene	1	U !
67-66-3	Chloroform		U
107-06-2	1,2-Dichloroethane	1	U
	2-Butanone	5	U
	Bromochloromethane		U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	lu l
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	1	U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	• •	U
	trans-1,3-Dichloropropene	1	U
	Bromoform		U
	4-Methyl-2-pentanone	• 7	Ū
	2-Hexanone	■ · :	Ū
	Tetrachloroethene	- I	Ū
	1,1,2,2-Tetrachloroethane_		Ū
106-93-4	1,2-Dibromoethane		Ū
108-88-3	Toluene	• :	U
	Chlorobenzene		Ū
100-41-4	Ethylbenzene		U
100-42-5		- I	Ū
	Xylenes (total)	- I	บ
	1,3-Dichlorobenzene		U
	1,4-Dichlorobenzene		U
	1,2-Dichlorobenzene		U
	1,2-Dichiorobenzene 1,2-Dibromo-3-chloropropane		Ü
	1,2-Bibromo-3-Chioropiopane_ 1,2,4-Trichlorobenzene		U
120 02 1=0==.	1,2,4-111chiolobenzene	-	

## 1LCE

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

E0057	1   

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.009

Date Received: 04/28/00

Lab File ID: G0936

Date Analyzed: 05/01/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E00F8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.012 Date Received: 04/28/00

Lab File ID: G0935 Date Analyzed: 05/01/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
	Bromomethane	1	U
	Vinyl chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene chloride	2	ប
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	1	ט
75-35-4	1,1-Dichloroethene	1	ע
75-34-3	1,1-Dichloroethane	1	ប
156-59-2	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	ប
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	ប
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane		U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	-	U
78-87-5	1,2-Dichloropropane	- I	U
10061-01-5	cis-1,3-Dichloropropene		U
79-01-6	Trichloroethene	1	U
124-48-1	Dibromochloromethane		U
79-00-5	1,1,2-Trichloroethane	I :	U
71-43-2	Benzene		Ū
	trans-1,3-Dichloropropene		Ū
	Bromoform	1	Ū
	4-Methyl-2-pentanone	i .	Ū
591-78-6	2-Hexanone	_	Ū
127-18-4	Tetrachloroethene		U
79-34-5	1,1,2,2-Tetrachloroethane		Ū
106-93-4	1,2-Dibromoethane		บ
108-88-3	Toluene		Ū
	Chlorobenzene		Ū
100-41-4	Ethylbenzene		Ū
100-42-5			Ū
	Xylenes (total)		บ
	1,3-Dichlorobenzene		Ū
	1,4-Dichlorobenzene		U
	1,2-Dichlorobenzene		Ū
	1,2-Dibromo-3-chloropropane		U
	1,2,4-Trichlorobenzene		บ
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## 1LCE

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

E00F8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.012

Date Received: 04/28/00

Lab File ID: G0935

Date Analyzed: 05/01/00

Purge Volume: 20 (mL) . Dilution Factor: 1.0

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CAS NUMBER	COMPOUND NAME	RT	(ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E00F9

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.013 Date Received: 04/28/00

Lab File ID: G0937 Date Analyzed: 05/01/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74 97 3	Chloromethane	1	U
74-87-3	Bromomethane		U
	Vinyl chloride		U
	Chloroethane		Ū
	Methylene chloride	. :	ָ ט
67-64-1			ט
	Carbon disulfide		Ū
	1,1-Dichloroethene		U
	1,1-Dichloroethane		บ
	cis-1,2-Dichloroethene		U
	trans-1,2-Dichloroethene		Ü
	Chloroform	• •	U
	1,2-Dichloroethane	• <u>1</u>	บ
	2-Butanone	• I	U
	Bromochloromethane		U
	1,1,1-Trichloroethane		U
	Carbon tetrachloride		U
	Bromodichloromethane		U
	1,2-Dichloropropane		U
1 10061 01 5	cis-1,3-Dichloropropene		U
1 70 01 6	Trichloroethene		U
			•
1 124-48-1	Dibromochloromethane	. [	U
	1,1,2-Trichloroethane		U
71-43-2			U
	trans-1,3-Dichloropropene	- 1	U
	Bromoform		U
	4-Methyl-2-pentanone		U
	2-Hexanone	• •	U
1 12/-18-4	Tetrachloroethene	• •	U
	1,1,2,2-Tetrachloroethane	•	U
1 106-93-4	1,2-Dibromoethane		U
108-88-3	Toluene		U
108-90-7	Chlorobenzene	• •	U
100-41-4	Ethylbenzene	• •	U
100-42-5		· 1	U
1 1330-20-7	Xylenes (total)	• •	U
	1,3-Dichlorobenzene	• •	U
	1,4-Dichlorobenzene	•	U
	1,2-Dichlorobenzene		U
	1,2-Dibromo-3-chloropropane_		U
120-82-1	1,2,4-Trichlorobenzene	1	U
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## 1LCE

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

E00F9

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.013

Date Received: 04/28/00

Lab File ID: G0937

Date Analyzed: 05/01/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EOOFA

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.014 Date Received: 04/28/00

Lab File ID: G0943 Date Analyzed: 05/02/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	Ū
	Bromomethane		Ū
	Vinyl chloride	1	Ū
	Chloroethane		Ū
	Methylene chloride		Ū
67-64-1		7	บี
	Carbon disulfide		Ū
	1,1-Dichloroethene	:	บ
	1,1-Dichloroethane	I :	บิ
	cis-1,2-Dichloroethene	· I	ָ ט
	trans-1,2-Dichloroethene		Ū
67-66-3	Chloroform		Ū
	1,2-Dichloroethane		Ū
	2-Butanone	<u> </u>	Ū
	Bromochloromethane	-	Ū
71-55-6	1,1,1-Trichloroethane		Ū
56-23-5	Carbon tetrachloride		Ū
	Bromodichloromethane	:	Ū
78-87-5	1,2-Dichloropropane	•	Ū
10061-01-5	cis-1,3-Dichloropropene		Ū
79-01-6	Trichloroethene	i .	Ŭ
	Dibromochloromethane		Ū
79-00-5	1,1,2-Trichloroethane	1	Ū
71-43-2		1	Ū
	trans-1,3-Dichloropropene	1	Ū
75-25-2			ับ
	4-Methyl-2-pentanone	1	Ū
	2-Hexanone	4	Ū
	Tetrachloroethene		lu i
	1,1,2,2-Tetrachloroethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-88-3		1	U
	Chlorobenzene	1	U i
	Ethylbenzene		Ū
100-42-5		<u> </u>	Ū
	Xylenes (total)		Ū
	1,3-Dichlorobenzene		Ū
	1,4-Dichlorobenzene		Ū
	1,2-Dichlorobenzene		Ŭ
	1,2-Dibromo-3-chloropropane	1	Ū
	1,2,4-Trichlorobenzene	i	Ū
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EDA SAMPLE NO.

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IPCE

TENTATIVELY IDENTIFIED COMPOUNDS LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: EDCG0

Date Received: 04/28/00 Lab Sample ID: 6040.014

rab File ID: G0943 Date Analyzed: 05/02/00

(Tu) burge Volume: 20 Dilution Factor: 1.0

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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EOOFB

Lab Name: PDP ANALYTICAL SERVICES Contfact: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6042.001 Date Received: 04/29/00

Lab File ID: G0945 Date Analyzed: 05/02/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q 
74-87-3	Chloromethane	1	Ū
74-83-9	Bromomethane	1	ប
75-01-4	Vinyl chloride	1	ប
75-00-3	Chloroethane	1	U
175-09-2	Methylene chloride	2	ប
67-64-1	Acetone	5	U
	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene	1	U ¦
75-34-3	1,1-Dichloroethane	1	l
156-59-2	cis-1,2-Dichloroethene		Ū
	trans-1,2-Dichloroethene	1	U
	Chloroform	1	U
	1,2-Dichloroethane	1	U
	2-Butanone	5	U
174-97-5	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane		U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane		U
10061-01-5	cis-1,3-Dichloropropene	1	U
179-01-6	Trichloroethene		ט ו
124-48-1	Dibromochloromethane	1	ן מן
	1,1,2-Trichloroethane	1	U
171-43-2		1	U
	trans-1,3-Dichloropropene	1	ប
75-25-2		1	ប
108-10-1	4-Methyl-2-pentanone	5	U
591-78-6	2-Hexanone	5	U
	Tetrachloroethene	1	ប
79-34-5	1,1,2,2-Tetrachloroethane	1	U
	1,2-Dibromoethane	1	U
108-88-3		1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
100-42-5		1	U
1330-20-7	Xylenes (total)	1	U
541-73-1	1,3-Dichlorobenzene	1	U
	1,4-Dichlorobenzene		U
	1,2-Dichlorobenzene	-	U
	1,2-Dibromo-3-chloropropane		U
	1,2,4-Trichlorobenzene	•	Ū
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#### 1LCE

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EOOFB

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6042.001

Date Received: 04/29/00

Lab File ID: G0945

Date Analyzed: 05/02/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000075-43-4 2.000060-29-7 3. 4.	Methane, dichlorofluoro- Ethyl ether	6.12	_	ЛИ ЛИ ———
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EPA SAMPLE NO. LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EOOFC

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Date Received: 04/29/00 Lab Sample ID: 6042.003

Date Analyzed: 05/02/00 Lab File ID: G0947

Dilution Factor: 1.0 Purge Volume: 20 (mL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
1		T	
	Chloromethane	1	U
	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene chloride	2	U
67-64-1		5	U
	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	2	
156-59-2	cis-1,2-Dichloroethene	1	Ū
156-60-5	trans-1,2-Dichloroethene	1	U
	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
	2-Butanone	5	U
174-97-5	Bromochloromethane	1	ប
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
	Bromodichloromethane	1	U
1 78-87-5	1,2-Dichloropropane	1	U
	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	1	U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2		1	U
	trans-1,3-Dichloropropene	1	U
	Bromoform	1	U
	4-Methyl-2-pentanone	5	U
	2-Hexanone	5	U
	Tetrachloroethene	1	U
	1,1,2,2-Tetrachloroethane	1	U
	1,2-Dibromoethane	1	U
108-88-3		1	U
	Chlorobenzene	1	U
	Ethylbenzene		U
100-42-5		- I	U
	Xylenes (total)		U
	1,3-Dichlorobenzene		U
	1,4-Dichlorobenzene		U
	1,2-Dichlorobenzene		U
	1,2-Dibromo-3-chloropropane_		U
120-82-1	1,2,4-Trichlorobenzene	1	U
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EPA SAMPLE NC.

# **J** PCE

# LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TOWN CONC.

Lab Name: PDP ANALYTICAL SERVICES COntract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: EDCG0

Lab Sample ID: 6042.003 Date Received: 04/29/00

Lab File ID: G0947 Date Analyzed: 05/02/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

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ווער	S	6.12	Methane, dichlorofluoro-	7.000075-43-4
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EOOFD

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6042.002 Date Received: 04/29/00

Lab File ID: G0946 Date Analyzed: 05/02/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
		1	<u> </u>
1 74-87-3	Chloromethane	_ [ ]	U
	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene chloride	0.6	J
67-64-1		5	U
75-15-0	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene	1	U
	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
	trans-1,2-Dichloroethene	<b>-</b> :	U
	Chloroform	<b>-</b> :	U
	1,2-Dichloroethane	<b>-</b> :	U
	2-Butanone	<b>-</b> :	U
	Bromochloromethane	- :	Ū
	1,1,1-Trichloroethane		บ
56-23-5	Carbon tetrachloride		บ
75-27-4	Bromodichloromethane	• :	บ
	1,2-Dichloropropane	<b>-</b> :	Ū
10061-01-5	cis-1,3-Dichloropropene		
79-01-6	Trichloroethene	1	
	Dibromochloromethane	1	
	1,1,2-Trichloroethane	<b>-</b> 1	Ū
71-43-2		-	Ū
	trans-1,3-Dichloropropene		Ū
	Bromoform	_ :	Ū
	4-Methyl-2-pentanone	- :	ับ
	2-Hexanone	<b>-</b> :	บ
	Tetrachloroethene	<b>-</b> :	Ū
79-34-5	1,1,2,2-Tetrachloroethane		Ū
	1,2-Dibromoethane		Ū
108-88-3		- :	บ
	Chlorobenzene		Ū
	Ethylbenzene	1	
100-42-5		<del>-</del> 1	Ū
	Xylenes (total)		Ū
541-73-1	1,3-Dichlorobenzene		Ū
	1,4-Dichlorobenzene		Ū
	1, 2-Dichlorobenzene		บ
	1,2-Dibromo-3-chloropropane		Ū
	1,2,4-Trichlorobenzene	<b>-</b> .	บ
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6042.002

Date Received: 04/29/00

Lab File ID: G0946

Date Analyzed: 05/02/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EOOFE

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6042.004 Date Received: 04/29/00

Lab File ID: G0949 Date Analyzed: 05/02/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	บ
	Bromomethane	:	U
	Vinyl chloride	•	U
75-00-3	Chloroethane		U
75-09-2	Methylene chloride	:	U
67-64-1	Acetone	i .	U
1 75-15-0	Carbon disulfide	:	U
75-35-4	1,1-Dichloroethene	1	Ŭ
1 75-34-3	1,1-Dichloroethane	3	<u> </u>
156-59-2	cis-1,2-Dichloroethene	1	U
	trans-1,2-Dichloroethene	1	U
	Chloroform	] 1	U
	1,2-Dichloroethane		U
	2-Butanone	I	U
	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	1	U
	1,2-Dichloropropane	•	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene		U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
	Bromoform	1	U
108-10-1	4-Methyl-2-pentanone	5	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-88-3	Toluene	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
100-42-5		1	י ט
1330-20-7	Xylenes (total)		U
	1,3-Dichlorobenzene		Ū
	1,4-Dichlorobenzene		U
	1,2-Dichlorobenzene		Ū
	1,2-Dibromo-3-chloropropane		Ū
	1,2,4-Trichlorobenzene		Ū
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Contract: 68-D7-0004

Lab Name: PDP ANALYTICAL SERVI	CES
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EOOFE

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6042.004

Date Received: 04/29/00

Lab File ID: G0949

Date Analyzed: 05/02/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG0

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCGO

Lab Sample ID: 6040.002 Date Received: 04/28/00

Lab File ID: G0926 Date Analyzed: 05/01/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	1	U
	Bromomethane	<b>-</b> :	U
	Vinyl chloride		บ
	Chloroethane		์ บ
	Methylene chloride	<del>-</del> :	Ū
67-64-1		<sup>-</sup> -	Ū
	Carbon disulfide	- :	Ū
	1,1-Dichloroethene	<del>-</del> ;	U
	1,1-Dichloroethane	- l 1	U
156-59-2	cis-1,2-Dichloroethene	- <del> </del> 1	U
	trans-1,2-Dichloroethene		U
67-66-3	Chloroform	- <u> </u> 1	U
107-06-2	1,2-Dichloroethane	-	U
	2-Butanone	- <b> </b> 5	U
174-97-5	Bromochloromethane		ט
171-55-6	1,1,1-Trichloroethane	- <del> </del> 1	U
56-23-5	Carbon tetrachloride	- <b> </b> 1	U
1 75-27-4	Bromodichloromethane	- l 1	U
1 78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	- <b> </b> 1	U
	Trichloroethene		U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
171-43-2	Benzene	- <b> </b> 1	U
10061-02-6	trans-1,3-Dichloropropene	- l 1	U
75-25-2	Bromoform	1	U
	4-Methyl-2-pentanone	_ <b> </b>	U
	2-Hexanone	_	U
127-18-4	Tetrachloroethene		U
79-34-5	1,1,2,2-Tetrachloroethane_	1	U
	1,2-Dibromoethane	1	∤U ∣
	Toluene		U
108-90-7	Chlorobenzene	_	U
100-41-4	Ethylbenzene	_	U
100-42-5	Styrene	_ ! 1	U
1330-20-7	Xylenes (total)	<del>-</del> .	U
541-73-1	1,3-Dichlorobenzene	<del>-</del> .	U
	1,4-Dichlorobenzene	<del>-</del> .	U
	1,2-Dichlorobenzene		U
	1,2-Dibromo-3-chloropropane	_ 1	U
120-82-1	1,2,4-Trichlorobenzene	_	U
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDCG0

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCGO

Lab Sample ID: 6040.002

Date Received: 04/28/00

Lab File ID: G0926

Date Analyzed: 05/01/00

Purge Volume: 20 (mL) . Dilution Factor: 1.0

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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCG2

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.004 Date Received: 04/28/00

Lab File ID: G0927 Date Analyzed: 05/01/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
		Ţ <del>-</del>	
74-87-3	Chloromethane	1	บ
74-83-9	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
	Chloroethane	1	U
75-09-2	Methylene chloride	1 2	U
67-64-1		5	U
75-15-0	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene	1	U
	1,1-Dichloroethane	1	U
	cis-1,2-Dichloroethene	1	U
	trans-1,2-Dichloroethene	1	U
	Chloroform	1	U
	1,2-Dichloroethane	1	U
	2-Butanone	5	U
	Bromochloromethane	1	
	1,1,1-Trichloroethane		
56-23-5	Carbon tetrachloride	1	
	Bromodichloromethane	i	
	1,2-Dichloropropane	1	
	cis-1,3-Dichloropropene	1	Ū
	Trichloroethene	1	
	Dibromochloromethane	i	
	1,1,2-Trichloroethane	1	
71-43-2		1	
	trans-1,3-Dichloropropene	1	
75-25-2		1	
	4-Methyl-2-pentanone	5	
	2-Hexanone	5	
	Tetrachloroethene	1	
79-34-5	1,1,2,2-Tetrachloroethane	1	
	1,2-Dibromoethane	i	
108-88-3		1	
	Chlauchanaana	1	
	Ethylbenzene	1	
100-42-5		1	
	Xylenes (total)	1	
	1,3-Dichlorobenzene	1	Ū
	1,4-Dichlorobenzene		Ū
	1,2-Dichlorobenzene	1	ט
	1,2-Dibromo-3-chloropropane	i i	Ŭ
_	1,2-bibromo-3-chioropropane_ 1,2,4-Trichlorobenzene	1	
1 120-02-1	1,2,4-111CH1OLODeHZeHe	i ⊥!	J
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDCG2

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Date Received: 04/28/00

Lab Sample ID: 6040.004

Lab File ID: G0927

Date Analyzed: 05/01/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624

ID: 0.53 (mm) Length: 60 (m)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG4

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Date Received: 04/28/00 Lab Sample ID: 6040.005

Date Analyzed: 05/01/00 Lab File ID: G0928

Dilution Factor: 1.0 Purge Volume: 20 (mL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	<del></del> .	Ū
75-01-4	Vinyl chloride	<b>- :</b>	บ
75-00-3	Chloroethane	<b></b> :	Ū
75-09-2	Methylene chloride	<b>-</b> :	Ū
67-64-1		5	U
	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene	_   _	U
75-34-3	1,1-Dichloroethane	_ <b> </b>	U
	cis-1,2-Dichloroethene	_   _	U
156-60-5	trans-1,2-Dichloroethene	_ <b> </b>	U
67-66-3	Chloroform		υ
107-06-2	1,2-Dichloroethane	_ <b> </b>	U
78-93-3	2-Butanone	<b>-  </b> 5	U
74-97-5	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane		Ū
78-87-5	1,2-Dichloropropane	<del>-</del> :	Ū
10061-01-5	cis-1,3-Dichloropropene		Ū.
79-01-6	Trichloroethene		U
124-48-1	Dibromochloromethane	- <b> </b>	U
79-00-5	1,1,2-Trichloroethane	1	บ
71-43-2	Benzene		U
10061-02-6	trans-1,3-Dichloropropene		Ū
75-25-2	Bromoform		U
	4-Methyl-2-pentanone		Ū
591-78-6	2-Hexanone		Ū
	Tetrachloroethene	<b>-</b> .	บ
	1,1,2,2-Tetrachloroethane	1	U
106-93-4	1,2-Dibromoethane		U
108-88-3			Ū
	Chlorobenzene		U
100-41-4	Ethylbenzene	- i i	Ū
100-42-5	Styrene		U
	Xylenes (total)	-	Ū
	1,3-Dichlorobenzene	<del>-</del> .	ับ
	1,4-Dichlorobenzene	<del>-</del> .	Ū
	1,2-Dichlorobenzene	<del></del> .	Ū
	1,2-Dibromo-3-chloropropane	<del>-</del> .	บ
	1,2,4-Trichlorobenzene		Ū
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDCG4

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.005

Date Received: 04/28/00

Lab File ID: G0928

Date Analyzed: 05/01/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG5

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.006 Date Received: 04/28/00

Lab File ID: G0929 Date Analyzed: 05/01/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
75-00-3	Chloroethane	1	U
	Methylene chloride	2	U
67-64-1	Acetone	5	ט
75-15-0	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	ט ו
	1,2-Dichloroethane		ប
78-93-3	2-Butanone	5	ַ ט
74-97-5	Bromochloromethane		ן מן
71-55-6	1,1,1-Trichloroethane		<u>ַ</u> ע
56-23-5	Carbon tetrachloride		ีบ ไ
75-27-4	Bromodichloromethane		ับ ไ
78-87-5	1,2-Dichloropropane		Ū
10061-01-5	cis-1,3-Dichloropropene		Ū
79-01-6	Trichloroethene		Ū
124-48-1	Dibromochloromethane	i	Ū
79-00-5	1,1,2-Trichloroethane	:	บ
71-43-2	Benzene	•	Ū
	trans-1,3-Dichloropropene	1	Ū
75-25-2	Bromoform	1	Ū
108-10-1	4-Methyl-2-pentanone	-	Ū
591-78-6	2-Hexanone		Ū
	Tetrachloroethene	•	Ū
79-34-5	1,1,2,2-Tetrachloroethane	i	บ
106-93-4	1,2-Dibromoethane	i	Ū
108-88-3	Toluene	1	Ü
	Chlorobenzene	•	Ū
100-41-4	Ethylbenzene		Ū
100-42-5	Styrene	- 1	Ŭ
	Xylenes (total)	_	Ŭ
541-73-1	1,3-Dichlorobenzene		Ŭ
106-46-7	1,4-Dichlorobenzene		Ū
	1,2-Dichlorobenzene		Ū
	1,2-Dibromo-3-chloropropane		ט
	1,2,4-Trichlorobenzene		ט
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.006

Date Received: 04/28/00

Lab File ID: G0929

Date Analyzed: 05/01/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG6

Lab Name: PDP ANALYTICAL SERVICES Contfact: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Date Received: 04/28/00 Lab Sample ID: 6040.007

Date Analyzed: 05/01/00 Lab File ID: G0930

Dilution Factor: 1.0 Purge Volume: 20 (mL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-97-3	Chloromethane	1	ָ   บ
	Bromomethane	-	U
	Vinyl chloride	•	U U
75-01-4	Chloroethane		U U
	Methylene chloride		U
67-64-1			ט
	Carbon disulfide	:	:
		1	U
75-35-4	1,1-Dichloroethene	1	U
/5-34-3	1,1-Dichloroethane		U
156-59-2	cis-1,2-Dichloroethene	I	U
156-60-5	trans-1,2-Dichloroethene	<u>:</u>	U
	Chloroform	1	U
	1,2-Dichloroethane	· ·	U
	2-Butanone	- I	U
74-97-5	Bromochloromethane		U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane		U
10061-01-5	cis-1,3-Dichloropropene	1	U
	Trichloroethene		U
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane		U
71-43-2	Benzene	1	U
	trans-1,3-Dichloropropene	1	U
	Bromoform	1	U
	4-Methyl-2-pentanone	5	U
591-78-6	2-Hexanone	. 5	U
	Tetrachloroethene		Ū
	1,1,2,2-Tetrachloroethane	i	Ū
	1,2-Dibromoethane	1	Ū
108-88-3	Toluene	: -	Ū
	Chlorobenzene	-	U
	Ethylbenzene	: -	Ū
100-42-5		: -	U
	Xylenes (total)	- E'	U
	1,3-Dichlorobenzene		U
	1,4-Dichlorobenzene		U
	·1,4-Dichlorobenzene		U
	1,2-Dichrorobenzene		
			U
120-02-1	1,2,4-Trichlorobenzene	1	U

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDCG6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.007

Date Received: 04/28/00

Lab File ID: G0930

Date Analyzed: 05/01/00

Purge Volume: 20 (mL) . Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG7

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Date Received: 04/28/00 Lab Sample ID: 6040.008

Date Analyzed: 05/01/00 Lab File ID: G0931

Purge Volume: 20 (mL) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74 07 3	Ch la namathana		1,,
	Chloromethane	<del></del> ;	U U
	Vinyl chloride	<del></del> :	U
75-01-4   75 00 2	Chloroethane	<del></del> :	U
	Methylene chloride	<del>-</del> :	U
67-64-1		·	บ
	Carbon disulfide	<del>-</del> :	U
	1,1-Dichloroethene	<b>-</b> :	ט
	1,1-Dichloroethane	<del></del> :	U
	cis-1,2-Dichloroethene	<del></del> :	U
! 156-60-5	trans-1,2-Dichloroethene	<del>-</del> :	U
1 67-66-3	Chloroform	<del>-</del> :	U
	1,2-Dichloroethane	<b>– ;</b>	ט
	2-Butanone	<u>- :</u>	U
	Bromochloromethane		Ū
	1,1,1-Trichloroethane_	<del></del> :	U
	Carbon tetrachloride	<b>-</b> :	U
	Bromodichloromethane	<del></del> ;	Ū
	1,2-Dichloropropane	<del>-</del> :	U
! 10061-01-5	cis-1,3-Dichloropropene		U
	Trichloroethene		U
	Dibromochloromethane		Ū
79-00-5	1,1,2-Trichloroethane	- [	U
71-43-2			U
	trans-1,3-Dichloropropene	_ ·	บ
	Bromoform	<del></del> .	U
	4-Methyl-2-pentanone	<b>_</b> :	Ū
	2-Hexanone	····	ט
	Tetrachloroethene	<del></del> ;	U
	1,1,2,2-Tetrachloroethane	<b>-</b> :	U
106-93-4	1,2-Dibromoethane	<del>-</del> :	บ
108-88-3	Toluene	<b>-</b> :	บ
108-90-7	Chlorobenzene		บ
100 30 7	Ethylbenzene	- [	lΰ
100-42-5	Styrene	-   1	U
4	Xylenes (total)	<del></del> ,	U
	1,3-Dichlorobenzene		U
	·1,4-Dichlorobenzene		U
	1,2-Dichlorobenzene		Ū
	1,2-Dichiorobenzene		U
	1,2,4-Trichlorobenzene		U
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCG7

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.008

Date Received: 04/28/00

Lab File ID: G0931

Date Analyzed: 05/01/00

Purge Volume: 20 (mL) . Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCG8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.010 Date Received: 04/28/00

Lab File ID: G0932 Date Analyzed: 05/01/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
	Bromomethane	- 	U
75-01-4	Vinyl chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene chloride	2	U
67-64-1	Acetone	5	ָּט ן
75-15-0	Carbon disulfide	_	U
75-35-4	1,1-Dichloroethene	[	U
	1,1-Dichloroethane	[	U
156-59-2	cis-1,2-Dichloroethene	1	U ¦
156-60-5	trans-1,2-Dichloroethene	1	U
	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
78-93-3	2-Butanone	-   5	U
	Bromochloromethane	-   1	บ
71-55-6	1,1,1-Trichloroethane	- - 1	U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	
	cis-1,3-Dichloropropene	1	U
	Trichloroethene	1	U
	Dibromochloromethane	1	U
	1,1,2-Trichloroethane	1	U
71-43-2		1	
	trans-1,3-Dichloropropene	<b>-</b> :	U
75-25-2		- i - i	
	4-Methyl-2-pentanone	5	
	2-Hexanone		Ū
	Tetrachloroethene	1	
	1,1,2,2-Tetrachloroethane	`	
	1,2-Dibromoethane	- i i i i	
108-88-3		- i - 1 i	
	Chlorobenzene	- [	
	Ethylbenzene	1	_
100-42-5		1	
	Xylenes (total)	- :	Ū
541-73-1	1,3-Dichlorobenzene		Ŭ
	1,4-Dichlorobenzene		Ŭ
	1, 2-Dichlorobenzene	• •	Ŭ !
	1,2-Dibromo-3-chloropropane		ָּט
	1,2-biblomo-3-chioloplopane_ 1,2,4-Trichlorobenzene	- ,	
120-02-1	I, Z, I-III ICIII OL ODEIIZEIIE	-	U

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDCG8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.010

Date Received: 04/28/00

Lab File ID: G0932

Date Analyzed: 05/01/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624

ID: 0.53 (mm) Length: 60 (m)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCG9

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.011 Date Received: 04/28/00

Lab File ID: G0933 Date Analyzed: 05/01/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	<del>-</del> :	Ū
75-01-4	Vinyl chloride	<del>-</del> :	U
	Chloroethane	<b>-</b> :	U
	Methylene chloride	-   2	Ū
67-64-1		- i 5	ប
	Carbon disulfide	_ i	U
	1,1-Dichloroethene	_ i	U
	1,1-Dichloroethane	- i 1	ַ ט
	cis-1,2-Dichloroethene	- i 1	U i
	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	- i 1	<b>ט</b>
107-06-2	1,2-Dichloroethane	- <u> </u> 1	ָ ע l
78-93-3	2-Butanone		lυ
	Bromochloromethane	1	ĺΰ
	1,1,1-Trichloroethane	_ i	บ
56-23-5	Carbon tetrachloride		U
	Bromodichloromethane	_ i	ี้ <u>บ</u>
	1,2-Dichloropropane		Ū
10061-01-5	cis-1,3-Dichloropropene		Ū
79-01-6	Trichloroethene		U
124-48-1	Dibromochloromethane	- 1	บ
79-00-5	1,1,2-Trichloroethane	- i	บ
71-43-2	Benzene	<del>-</del> .	ע
	trans-1,3-Dichloropropene	_ •	ี้ บ
	Bromoform	<del>-</del> ,	Ū
	4-Methyl-2-pentanone	5	Ū
	2-Hexanone	<del>-</del> ;	ַ ד
	Tetrachloroethene	- :	Ū
	1,1,2,2-Tetrachloroethane		Ū
106-93-4	1,2-Dibromoethane	<del>-</del> .	U
108-88-3	Toluene	- i	Ū
108-90-7	Chlorobenzene		Ū
100-41-4	Ethylbenzene	- <b>i</b>	Ū
100-42-5	Styrene		Ū
1	Xylenes (total)	- ,	Ū
	1,3-Dichlorobenzene	<del></del>	Ū
	1,4-Dichlorobenzene	<del>-</del> .	Ū
	1,2-Dichlorobenzene	<del>-</del> .	Ū
	1,2-Dibromo-3-chloropropane		Ū
	1,2,4-Trichlorobenzene	<del>-</del> .	U
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EDCG9

EPA SAMPLE NC.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCGO

Lab Sample ID: 6040.011

Date Received: 04/28/00

Lab File ID: G0933

Date Analyzed: 05/01/00

Purge Volume: 20 (mL) . Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCH0

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.003 Date Received: 04/28/00

Lab File ID: G0934 Date Analyzed: 05/01/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	ប
	Bromomethane	1	U
	Vinyl chloride	1	U
	Chloroethane	1	U
	Methylene chloride	5	
67-64-1	Acetone		J
	Carbon disulfide	0.8	J
	1,1-Dichloroethene	1	ט
75-34-3	1,1-Dichloroethane	1	ן ט
	cis-1,2-Dichloroethene	1	U
	trans-1,2-Dichloroethene	1	Ū
67-66-3	Chloroform	•	ប
	1,2-Dichloroethane	1	U
	2-Butanone	5	U
74-97-5	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	1	U
1 78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	1	ן ט
124-48-1	Dibromochloromethane	1	ן ט
1 79-00-5	1,1,2-Trichloroethane	1	U
71-43-2		1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
75-25-2	Bromoform	1	U
108-10-1	4-Methyl-2-pentanone	5	U
	2-Hexanone	5	U
	Tetrachloroethene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	ן ט
106-93-4	1,2-Dibromoethane	1	U
108-88-3		1	U
	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	ן טן
100-42-5	Styrene	1	ן ט
	Xylenes (total)	1	U
	1,3-Dichlorobenzene		U
	1,4-Dichlorobenzene	1	ן טן
	1,2-Dichlorobenzene	1	ן ט
	1,2-Dibromo-3-chloropropane_	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
}			

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EDCH0

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Date Received: 04/28/00

Lab Sample ID: 6040.003

Lab File ID: G0934

Date Analyzed: 05/01/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624

ID: 0.53 (mm) Length: 60 (m)

		ı		i
CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VLCS96

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: GVLCS060 Date Received: \_\_\_\_\_

Lab File ID: G0925 Date Analyzed: 05/01/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
-	Bromomethane	1	U
	Vinyl chloride	4	1
	Chloroethane	1	U
75-09-2	Methylene chloride	1 2	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene	1	U
	1,1-Dichloroethane	1	U
	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform_	•	U
	1,2-Dichloroethane	5	
	2-Butanone	5	U
	Bromochloromethane	1	Ŭ
	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	4	l
	Bromodichloromethane	1	U
1 78-87-5	1,2-Dichloropropane	5	١
10061-01-5	cis-1,3-Dichloropropene	4	l
79-01-6	Trichloroethene	5	l
124-48-1	Dibromochloromethane	1	U
179-00-5	1,1,2-Trichloroethane	5	l
171-43-2	Benzene	<u> </u>	
10061-02-6	trans-1,3-Dichloropropene _	1	U
75-25-2	Bromoform	4	] [
108-10-1	4-Methyl-2-pentanone	5	U
591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	4	<b>.</b>
179-34-5	1,1,2,2-Tetrachloroethane	1	บ
106-93-4	1,2-Dibromoethane	4	
108-88-3		1	Ū
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
100-42-5		1	U
1330-20-7	Xylenes (total)	1	U
	1,3-Dichlorobenzene	1	U
	1,4-Dichlorobenzene	4	
95-50-1	1,2-Dichlorobenzene	i	Ū
	1,2-Dibromo-3-chloropropane		Ū
	1,2,4-Trichlorobenzene	•	Ū
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: GVLCS061

Date Received:

Lab File ID: G0942

Date Analyzed: 05/02/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	0
			<u> </u>
74-87-3	Chloromethane	1	. U
74-83-9	Bromomethane	- <b> </b>	. U
75-01-4	Vinyl chloride	<b>~  </b> 4	:
175-00-3	Chloroethane	- <b> </b> 1	ΙŪ
75-09-2	Methylene chloride	- <b> </b> 2	U
67-64-1		<sup>-</sup>   5	[U
75-15-0	Carbon disulfide	- 	U
75-35-4	1,1-Dichloroethene	1	U
	1,1-Dichloroethane	-   1	U
156-59-2	cis-1,2-Dichloroethene		U
156-60-5	trans-1,2-Dichloroethene	- ,	U
	Chloroform	- i	ĺυ
	1,2-Dichloroethane	- i 5	Ì
	2-Butanone	- <b> </b> 5	Ū
	Bromochloromethane	- i	U
	1,1,1-Trichloroethane	- i 1	U
56-23-5	Carbon tetrachloride	-   4	
	Bromodichloromethane	<del>-</del> ;	Ū
	1,2-Dichloropropane	-   4	i
10061-01-5	cis-1,3-Dichloropropene		i ——
79-01-6	Trichloroethene	-   4	i
	Dibromochloromethane	- i	Ū
	1,1,2-Trichloroethane	4	i
71-43-2		- j 5	i
	trans-1,3-Dichloropropene	<b>→</b> }	Ū
75-25-2		- 4	
108-10-1	4-Methyl-2-pentanone	- ,	Ū
	2-Hexanone	<b>~ )</b> 5	U
127-18-4	Tetrachloroethene	-   4	1
79-34-5	1,1,2,2-Tetrachloroethane	1	Ū
	1,2-Dibromoethane	-   4	į
108-88-3		1	Ū
	Chlorobenzene	1	Ü
100-41-4	Ethylbenzene	-	U
100-42-5		– i	Ū
	Xylenes (total)	_ ,	ปี
	1,3-Dichlorobenzene		Ū
	1,4-Dichlorobenzene		
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	1,2-Dibromo-3-chloropropane	<b>-</b> :	U
	1,2,4-Trichlorobenzene	<del>-</del> .	U
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# 2LCB LOW CONC. WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

							<del> </del>		
	EPA	NBZ	FBP	TPH	PHL	2FP	TBP	OTHER	• •
	SAMPLE NO.	REC #	%REC #	%REC #	REC #	%REC #	%REC #	 	OUT
	========= 	=====   	=====	=====	=====  	=====	=====	=====	===
	SBLK39	83	86	94	75	82	92		0
02	SLCS70	81	81	97	79	81	95		0 !
03	EDCG0	78	79	94	76	83	93		0
	EDCG2	79 ¦	82	94	77	82	89		0 1
05	EDCG4	70	68	82	66	76	84		¦o
06	EDCG5	86	89	100	84	93	106		0 !
07	EDCG6	79	81	99	76	85	96		0
08	EDCG7	81	79	88 ¦	74	84	85		0 1
09	EDCG8	82	86	98	77	85	98		0 1
10	EDCG9	85	84	95	83	91	97		0
11	EOOF8	55	55 ¦	63	54	50	65		0
12	EOOF9	70	69	40	70	59	92		0 ;
33	EOOFA .	72	75	78	76	73	89		0
14	EOOFB	59	55	71	65	62	87		0 ;
15	EOOFC	78	75	73	85	79	78		0
	EOOFE	83	72	64	88	86	79		0
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# QC LIMITS %REC

PODA TT TOUT

NBZ	=	Nitrobenzene-d5	(23-120)
FBP	=	2-Fluorobiphenyl	(30-115)
TPH	=	Terphenyl-d14	(18-140)
PHL	=	Phenol-d5	(15-115)
2FP	=	2-Fluorophenol	(15-121)
TBP	=	2,4,6-Tribromophenol	(15-130)

- # Column to be used to flag recovery values.
  \* Values outside of contract required QC limits.
- D Surrogate diluted out.

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE LAB CONTROL SAMPLE RECOVERY

SLCS70

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCG0

Lab Sample ID: SVOL602

LCS Lot No.:

Lab File ID: H1011

Date Extracted: 05/03/00

LCS Aliquot: 1000 (uL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

COMPOUND	AMOUNT ADDED (ng)	AMOUNT RECOVERED (ng)	%REC #	QC LIMITS
Phenol	40000	30000	75	40-120
bis(2-Chloroethyl)ether	20000	17000	85	50-110
2-Chlorophenol	40000	33000	82	50-110
N-Nitroso-di-n-propylamine	20000	16000	80	30-110
Hexachloroethane	20000	9000	45	20-110
Isophorone	20000	12000	60	50-110
Naphthalene	20000	16000	80	30-110
4-Chloroaniline	40000	28000	70	10-120
2,4,6-Trichlorophenol	40000	33000	82	40-120
2,4-Dinitrotoluene	20000	12000	60	30-120
Diethylphthalate	20000	14000	70	50-120
N-Nitrosodiphenylamine	20000	14000	70	30-110 ¦
Hexachlorobenzene	20000	14000	70	40-120
Benzo(a)pyrene	20000	15000	75	50-120

LCS	Recovery:	0	outside
$\Gamma$	VECOAETA:	•	Outsitud

de limits out of 14 total.

COMMENTS:	

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

<sup>\*</sup> Values outside of QC limits.

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCG0

Lab Sample ID: SVOB712 Date Extracted: 05/03/00

Lab File ID: H1010 Date Analyzed: 05/12/00

Instrument ID: H-HP5973 Time Analyzed: 0217

# THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

	EPA	LAB	LAB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
			!	
01		SVOL602	H1011	05/12/00
02	EDCG0	6040.002	H1012	05/12/00
03	EDCG2	6040.004	H1013	05/12/00
05	EDCG4 EDCG5	6040.005 6040.006	H1014 H1015	05/12/00   05/12/00
06		6040.000	H1015	05/12/00
07	EDCG7	6040.007	H1017	05/12/00
08	EDCG7	6040.008	H1018	05/12/00
09		6040.010	H1019	05/12/00
10		6040.012	H1020	05/12/00
11	EOOF9	6040.012	H1021	05/12/00
12		6040.013	H1022	05/12/00
13		6042.001	H1025	05/12/00
14		6042.003	H1026	05/12/00
15		6042.004	H1027	05/12/00
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COMMENTS:		

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SBLK39

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: SVOB712

Date Received: \_\_\_\_

Lab File ID: H1010

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION (ug/L)

CAS NO.	COMPOUND	(ug/L)	Q
108-95-2		•	U
	bis(2-Chloroethyl)ether	:	ן ט
	2-Chlorophenol	5	U
	2-Methylphenol	:	U
108-60-1	2,2'-oxybis(1-Chloropropane)	!	U
	4-Methylphenol	5	U
621-64-7	N-Nitroso-di-n-propylamine		ט
	Hexachloroethane	5	U
	Nitrobenzene	5	U
1 78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	<del> </del> 5	U
105-67-9	2,4-Dimethylphenol	5	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	5	U
	Hexachlorobutadiene	<b>!</b> 5	ן טן
1 59-50-7	4-Chloro-3-methylphenol	5	ט
91-57-6	2-Methylnaphthalene	5	ט ו
	Hexachlorocyclopentadiene	5	ן ט
88-06-2	2,4,6-Trichlorophenol	5	ט
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalane	5	U !
1 88-74-4	2-Nitroaniline	20	U
	Dimethylphthalate	5	ן ט
1 208-96-8	Acenaphthylene	5	lu Ì
606-20-2	2,6-Dintrotoluene	5	U
99-09-2	3-Nitroaniline	20	ט ו
	Acenaphthene	5	: :
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EPA SAMPLE NO.

-LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SBLK39

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: SVOB712 Date Received: \_\_\_\_\_

Lab File ID: H1010 Date Extracted: 05/03/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
		1	
51-28-5	2,4-Dinitrophenol	20	ן טן
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	5	U
121-14-2	2,4-Dinitrotoluene	5	U
84-66-2	Diethylphthalate	5	U
7005-72-3	4-Chlorophenyl-phenylether_	5	U
86-73-7	Fluorene	5	U
	4-Nitroaniline	20	U
	4,6-Dinitro-2-methylphenol	20	U !
86-30-6	N-Nitrosodiphenylamine (1)	5	U
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	20	T I
85-01-8	Phenanthrene	5	U
120-12-7	Anthracene	5	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene		U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate		U
91-94-1	3,3'-Dichlorobenzidine	5	U
56-55-3	Benzo(a)anthracene	.5	U
218-01-9	Chrvsene	- 1 5	U
117-81-7	bis(2-Ethylhexyl)phthalate	1 5	U
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b) fluoranthene	5	ן ט
207-08-9	Benzo(k)fluoranthene	5	U !
50-32-8	Benzo(a)pyrene	1 5	U
193-39-5	Indeno(1,2,3-cd)Pyrene	5	U
53-70-3	Dibenz(a,h)anthracene	5	ן טן
191-24-2	Benzo(g,h,i)perylene	5	ן ט
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(1) - Cannot be separated from Diphenylamine

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

# TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

SBLK39

Lab Sample ID: SVOB712

Date Received: \_\_\_\_

Lab File ID: H1010

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EOOF8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.012 Date Received: 04/28/00

Lab File ID: H1020 Date Extracted: 05/03/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION CAS NO. COMPOUND (ug/L) Q

	<b>-</b>	
108-95-2Phenol		U
111-44-4bis(2-Chloroethyl)ether		บ
95-57-82-Chlorophenol	-	U
95-48-72-Methylphenol	!	บ
108-60-12,2'-oxybis(1-Chloropropane)	<u> </u>	U
106-44-54-Methylphenol	:	U
621-64-7Nitroso-di-n-propylamine	:	บ
67-72-1Hexachloroethane	1	U
98-95-3Nitrobenzene	· ·	U
78-59-1Isophorone	:	U
88-75-52-Nitrophenol	:	ប
105-67-92,4-Dimethylphenol	:	U
111-91-1bis(2-Chloroethoxy)methane	:	U
120-83-22,4-Dichlorophenol	:	U
91-20-3Naphthalene	:	U
106-47-84-Chloroaniline	:	l U
87-68-3Hexachlorobutadiene	:	ប
59-50-74-Chloro-3-methylphenol	•	U
	:	U
91-57-62-Methylnaphthalene	!	្រ !ប
77-47-4Hexachlorocyclopentadiene	•	! -
88-06-22,4,6-Trichlorophenol		U
95-95-42,4,5-Trichlorophenol		: -
91-58-72-Chloronaphthalane		U
88-74-42-Nitroaniline	20	
131-11-3Dimethylphthalate	:	U
208-96-8Acenaphthylene		U
606-20-22,6-Dintrotoluene	· -	U
99-09-23-Nitroaniline	20	: -
83-32-9Acenaphthene	5	U
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EOOF8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.012

Date Received: 04/28/00

Lab File ID: H1020

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

CONCENTRATION

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	(ug/L)	Q
51-28-5	2,4-Dinitrophenol	20	บ
	4-Nitrophenol	1 20	U
	Dibenzofuran	5	U
121-14-2	2,4-Dinitrotoluene	5	U
	Diethylphthalate	5	ן טן
	4-Chlorophenyl-phenylether	5	U
	Fluorene	1 5	U
100-01-6	4-Nitroaniline	20	\U
534-52-1	4,6-Dinitro-2-methylphenol	! 20	U
86-30-6	N-Nitrosodiphenylamine (1)	5	U !
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	20	U
	Phenanthrene	1 5	U
120-12-7	Anthracene	<b> </b>	U
84-74-2	Di-n-butylphthalate	1 5	U
	Fluoranthene	5	ן טן
129-00-0		1 5	U l
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	5	U
	Benzo(a) anthracene	5	U
1 218-01-9	Chrysene	5	U
117-81-7	bis(2-Ethylhexyl)phthalate	4	J
	Di-n-octylphthalate		U
205-99-2	Benzo(b) fluoranthene	5	U
1 207-08-9	Benzo(k) fluoranthene	5	10 1
50-32-8	Benzo(a)pyrene	5	ן ט
	Indeno(1,2,3-cd)Pyrene	5	U
53-70-3	Dibenz(a,h)anthracene	5	U I
191-24-2	Benzo(g,h,i)perylene	5	U
i			!

(1) - Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

# TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EOOF8

Lab Sample ID: 6040.012

Date Received: 04/28/00

Lab File ID: H1020

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

1.       2.         3.       4.         5.       6.         7.       8.         9.       10.         11.       12.         13.       14.         15.       16.         17.       18.         19.       20.         21.       22.         23.       24.         25.       26.         27.       28.         29.       9.	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
3 .	'		Ī	Ī	
7.       8.         9.          10.          11.          12.          13.          14.          15.          16.          17.          18.          19.          20.          21.          22.          23.          24.          25.          26.          27.          28.          29.	2.				
7.       8.         9.          10.          11.          12.          13.          14.          15.          16.          17.          18.          19.          20.          21.          22.          23.          24.          25.          26.          27.          28.          29.	3.				
7.       8.         9.          10.          11.          12.          13.          14.          15.          16.          17.          18.          19.          20.          21.          22.          23.          24.          25.          26.          27.          28.          29.	i 4		<u> </u>	<u> </u>	
7.       8.         9.          10.          11.          12.          13.          14.          15.          16.          17.          18.          19.          20.          21.          22.          23.          24.          25.          26.          27.          28.          29.	i	<u> </u>	l	<u> </u>	
8.       9.         10.       11.         11.       12.         13.       14.         15.       15.         16.       17.         18.       19.         20.       21.         22.       23.         24.       25.         26.       27.         28.       29.	!		!	}	
9.       10.         11.       12.         13.       14.         15.       16.         17.       18.         19.       20.         21.       22.         23.       24.         25.       26.         27.       28.         29.       10.			<u> </u>	<u> </u>	
11.       12.         13.          14.          15.          16.          17.          18.          19.          20.          21.          22.          23.          24.          25.          26.          27.          28.          29.			!		
12.       13.                                                                                                               .	!		ļ ———		
13.	11.				i — i
14.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <td< td=""><td>12.</td><td></td><td>i ——</td><td></td><td>i — i</td></td<>	12.		i ——		i — i
15.	13.				
16.       17.         18.       19.         20.       21.         22.       23.         24.       25.         26.       27.         28.       29.	14.				
17.	15.		[		11
18.	16.	1	1		l!
19.       20.       21.       22.       23.       24.       25.       26.       27.       28.       29.				<u> </u>	
20.       21.       22.       23.       24.       25.       26.       27.       28.       29.	·		!		
21.       22.       23.       24.       25.       26.       27.       28.       29.					
22.       23.       24.       25.       26.       27.       28.       29.			!		ļ;
23.             24.             25.             26.             27.             28.             29.				ļ	
24.       25.       26.       27.       28.       29.			<u> </u>	ļ	
25.			İ		
26.       27.       28.       29.	·	·	i		
27.       28.       29.		-	İ		
28. 29.	·		ļ	ļ	
29.	100			!	
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i 5U . : : : : : : : : : : : : : : : : : :	30.		ļ		
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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EOOF9

Date Extracted: 05/03/00

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Date Received: 04/28/00 Lab Sample ID: 6040.013

Lab File ID: H1021

Date Analyzed: 05/12/00 Sample Volume: 1000 (mL)

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
108-95-2	Phenol		U U
95-57-8	2-Chlorophenol	;	U I
	2-Methylphenol	!	U
	2,2'-oxybis(1-Chloropropane)	:	tu (
	4-Methylphenol	5	Ū
	N-Nitroso-di-n-propylamine	5	U i
	Hexachloroethane	5	ן טן
98-95-3	Nitrobenzene	1 5	U
78-59-1	Isophorone	5	U
	2-Nitrophenol	5	U
	2,4-Dimethylphenol	5	U
	bis(2-Chloroethoxy)methane	5	ט
	2,4-Dichlorophenol	5	U
	Naphthalene	5	! * !
	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	•	U
	4-Chloro-3-methylphenol	5	:
	2-Methylnaphthalene	5	:
77-47-4	Hexachlorocyclopentadiene	5	- :
88-06-2	2,4,6-Trichlorophenol	5	
i 95-95-4	2,4,5-Trichlorophenol	20	: :
	2-Chloronaphthalane	5	: - :
	2-Nitroaniline	20	: - :
131-11-3	Dimethylphthalate	5	:
	Acenaphthylene	5	! - !
606-20-2	2,6-Dintrotoluene	:	Ū
	3-Nitroaniline	20	
83-32-9 !	Acenaphthene	5	Ŭ
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#### 1LCC

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EOOF9

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.013 Date Received: 04/28/00

Lab File ID: H1021 Date Extracted: 05/03/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
51-28-5	2,4-Dinitrophenol	20	U
100-02-7	4-Nitrophenol	20	:
132-64-9	Dibenzofuran		lu i
	2,4-Dinitrotoluene	5	U
	Diethylphthalate		ן טן
	4-Chlorophenyl-phenylether_	5	U
	Fluorene	5	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	ן ט ן
	N-Nitrosodiphenylamine (1)		U
	4-Bromophenyl-phenylether		U
118-74-1	Hexachlorobenzene	- - 5	U
1 87-86-5	Pentachlorophenol	20	U
	Phenanthrene		U
	Anthracene		ן טן
84-74-2	Di-n-butylphthalate	- <del> </del> 5	ן ט
206-44-0	Fluoranthene	5	lu l
129-00-0	Pyrene	-   5	ן ט
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	5	ן טן
56-55-3	Benzo(a)anthracene	5	U !
218-01-9	Chrysene	5	ן טן
117-81-7	bis(2-Ethylhexyl)phthalate	7	{
117-84-0	Di-n-octylphthalate	5	l Ū
205-99-2	Benzo(b) fluoranthene	5	ן ט
207-08-9	Benzo(k) fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	U
193-39-5	Indeno(1,2,3-cd)Pyrene	5	U
53-70-3	Dibenz(a,h)anthracene	5	U
191-24-2	Benzo(g,h,i)perylene	5	U
·		. '	'

(1) - Cannot be separated from Diphenylamine

## TENTATIVELY IDENTIFIED COMPOUNDS

EOOF9

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.013

Date Received: 04/28/00

Lab File ID: H1021

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
	Dodecanoic acid Unknown	•	23  16 	JN J
4. 5. 6.				
8. 9. 10.				
11.   12.   13.				
15. 16. 17.				
18.   19.   20.				
22.   23.   24.				
25.   26.   27.   28.	1			
29.				

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EOOFA

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.014

Date Received: 04/28/00

Lab File ID: H1022

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
108-95-2	Phenol	5	บ
	bis(2-Chloroethyl)ether	5	Ū
95-57-8	2-Chlorophenol	j 5	ט ו
	2-Methylphenol	5	U
108-60-1	2,2'-exybis(1-Chloropropane)	5	ן ט
	4-Methylphenol	5	ן ט
	N-Nitroso-di-n-propylamine_	5	ן ט
67-72-1	Hexachloroethane	5	U
98-95-3	Nitrobenzene	5	ן טן
78-59-1	Isophorone	<b>!</b> 5	U
	2-Nitrophenol	5	U l
	2,4-Dimethylphenol	5	U
	bis(2-Chloroethoxy)methane	5	U
	2,4-Dichlorophenol	5	ט
	Naphthalene	5	U
	4-Chloroaniline	5	U
	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	·	U
88-06-2	2,4,6-Trichlorophenol	-	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalane	5	U
	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	5	U
208-96-8	Acenaphthylene	5	U
606-20-2	2,6-Dintrotoluene	5	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	5	U
1			

EPÀ SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EOOFA

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.014 Date Received: 04/28/00

Lab File ID: H1022 Date Extracted: 05/03/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	0
		· 5 /	
 ! 51-28-5	2,4-Dinitrophenol	20	II
	4-Nitrophenol	20	
132-64-9	Dibenzofuran		บ
121-14-2	2,4-Dinitrotoluene		ับ
84-66-2	Diethylphthalate		U
	4-Chlorophenyl-phenylether_		บ
	Fluorene		บ
	4-Nitroaniline	20	
	4,6-Dinitro-2-methylphenol	•	-
	Nitrosodiphenylamine (1)		Ū
	4-Bromophenyl-phenylether		Ū
	Hexachlorobenzene		U
87-86-5	Pentachlorophenol	20	U
	Phenanthrene		U
120-12-7	Anthracene		U
84-74-2	Di-n-butylphthalate	5	ĺυ
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	5	U
	3,3'-Dichlorobenzidine	5	ប '
56-55-3	Benzo(a) anthracene	5	U
218-01-9	Chrysene	5	U
	bis(2-Ethylhexyl)phthalate_		ប
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b)fluoranthene	5	ប
207-08-9	Benzo(k) fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	!ប
193-39-5	Indeno(1,2,3-cd)Pyrene	5	U
53-70-3	Dibenz(a,h)anthracene	5	ប
	Benzo(g,h,i)perylene		U
1		1	

## TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EOOFA

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.014

Date Received: 04/28/00

Lab File ID: H1022

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

<del></del>		·	<del> </del>	
CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
	Dodecanoic acid	19.90  22.75		JN
2.	Unknown Unknown	24.75	111	[J ]
3.	i	124.90 I	i + 0	
4 ·	-	<del></del>		[
5. 6.		<u> </u>	\ <del></del>	
7.	-	<del> </del>		<u> </u>
8.	-	<del> </del>		
9.		<u> </u>	<u> </u>	<u> </u>
10.		<u> </u>		
11				ii
12.		i		ii
13.				
14.				ii
15.				i — i
16.		i		
17.	1	i		
18.	1	i		ii
19.	1	i		i
20.		i		<u> </u>
21.				1
22.				
23.				
24.		!		
25.		!		1
26.			i	
27.		1		
28.		!		11
29.		l		
30.				1
		1	1	

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EOOFB

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCGO

Lab Sample ID: 6042.001

Date Received: 04/29/00

Lab File ID: H1025

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
108-95-2	Phenol	5	U
	bis(2-Chloroethyl)ether	:	II
95-57-8	2-Chlorophenol	5	Ū
	2-Methylphenol	5	บ
	2,2'-oxybis(1-Chloropropane)	j 5	ĺΰ
	4-Methylphenol	5	U
	N-Nitroso-di-n-propylamine	5	ប
	Hexachloroethane	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	ן טן
88-75-5	2-Nitrophenol	5	ן ט
105-67-9	2,4-Dimethylphenol	<b>!</b> 5	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
	Naphthalene	5	U
	4-Chloroaniline	5	U
	Hexachlorobutadiene	5	U
	4-Chloro-3-methylphenol	5	U
	2-Methylnaphthalene	5	U
	Hexachlorocyclopentadiene	5	
	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalane	:	U
	2-Nitroaniline	20	! - !
131-11-3	Dimethylphthalate		U
	Acenaphthylene	5	! - !
606-20-2	2,6-Dintrotoluene	:	U
99-09-2	3-Nitroaniline	20	: - :
83-32-9	Acenaphthene	5	U
i		i	i



EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EOOFB

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6042.001

Date Received: 04/29/00

Lab File ID: H1025

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
51-28-5	2,4-Dinitrophenol4-Nitrophenol4-NitrophenolDibenzofuran2,4-Dinitrotoluene2,4-Dinitrotoluene10iethylphthalate4-Chlorophenyl-phenyletherFluorene4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluoranthenePyreneButylbenzylphthalateButylbenzylphthalateBenzo(a)anthracene	(ug/L)  20 20 5 5 5 5 20 20 5 5 5 5 5 5 5 5 5	
53-70-3	Dibenz(a,h)anthracene Benzo(g,h,i)perylene	5	U U

### TENTATIVELY IDENTIFIED COMPOUNDS

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: EDCG0

20	Cartera ar .	69-D7-0004	

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EOOFB

Date Received: 04/29/00

Lab Sample ID: 6042.001

Lab File ID: H1025

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

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==	=	==	=	==	=	==	=	==	=	==	=	==	=	==
	_				_		_		_					

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.	Unknown	15.73	25	[] = = ]
2.	i !	<u>i</u> .	į	
3.		]		
4.		l	I	
5	l	! !	l	
6		! !	<u> </u>	
7	!	!	<u> </u>	
8				
9.				
10				
11.		ļ	<u> </u>	ii
12.		İ	<u></u>	
13.		<u> </u>	İ	j
14.				i
15.		ļ		
16.	İ	İ		
17. 18.	İ	¦	i	
1 7 0		<u> </u>	<u> </u>	
19.   20.		<u> </u>	<u> </u>	
20.		<u> </u>	<u> </u>	
1 22		ļ <del></del>	ļ	
i		!	<u> </u>	¦¦
		<del> </del>		
25		<u> </u>		
100		<del> </del>		
1 2 7		<u> </u>	ļ	
120		\ <u> </u>	!	
20				
30.		İ		

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EOOFC

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: 6042.003

Date Received: 04/29/00

Lab File ID: H1026

Date Extracted: 05/03/00

CONCENTRATION

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

CAS NO.	COMPOUND	(ug/L)	Q
108-95-2	Phenol	5	U
111-44-4	bis(2-Chloroethyl)ether	<u> </u>	U
95-57-8	2-Chlorophenol	5	U !
1 95-48-7	2-Methylphenol	5	U !
108-60-1	2,2'-oxybis(1-Chloropropane)	5	U
106-44-5	4-Methylphenol	} 5	U
621-64-7	N-Nitroso-di-n-propylamine	5	ן טן
67-72-1	Hexachloroethane	5	U !
98-95-3	Nitrobenzene	5	lu ¦
78-59-1	Isophorone	5	U
	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
91-20-3	Naphthalene	5	U
	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	5	U
1 59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	1 5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalane	5	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	; 5	U
208-96-8	Acenaphthylene	5	U
1 606-20-2	2,6-Dintrotoluene	5	U
99-09-2	3-Nitroaniline	20	ן ט
1 83-32-9	Acenaphthene	5	U
		1	1

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6042.003 Date Received: 04/29/00

Lab File ID: H1026 Date Extracted: 05/03/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
		Ţ	<del></del>
51-28-5	2,4-Dinitrophenol	20	ט
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran		U
121-14-2	2,4-Dinitrotoluene	5	U !
84-66-2	Diethylphthalate	5	U
	4-Chlorophenyl-phenylether	5	U
1 86-73-7	Fluorene	5	ן טן
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U 1
86-30-6	N-Nitrosodiphenylamine (1)	5	U
101-55-3	4-Bromophenyl-phenylether	5	U !
	Hexachlorobenzene	5	U
	Pentachlorophenol	20	U
	Phenanthrene	5	U
120-12-7	Anthracene	5	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	5	ן טן
129-00-0	Pyrene	5	U
1 85-68-7	Butylbenzylphthalate	· \ 5	ן טן
1 91-94-1	3,3'-Dichlorobenzidine	·   5	ן ט
56-55-3	Benzo(a) anthracene	5	ן טן
218-01-9	Chrysene	5	[U
117-81-7	bis(2-Ethylhexyl)phthalate	5	\U
	Di-n-octylphthalate		U
205-99-2	Benzo(b) fluoranthene	1 5	U
	Benzo(k)fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	ן טן
193-39-5	Indeno(1,2,3-cd)Pyrene	5	ט
53-70-3	Dibenz(a,h)anthracene	5	U
	Benzo(g,h,i)perylene		U
l		.	

(1) - Cannot be separated from Diphenylamine

## TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EOOFC

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6042.003

Date Received: 04/29/00

Lab File ID: H1026

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000540-97- 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21.	Cyclohexasiloxane, dodec Unknown		(ug/L)	JN J
1 7) 🚨				

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA CHEET

EOOFE

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6042.004

Date Received: 04/29/00

Lab File ID: H1027

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION

CAS NO.	COMPOUND	(ug/L)	Q
108-95-2	Phenol	5	U
111-44-4	bis(2-Chloroethyl)ether	5	lu l
95-57-8	2-Chlorophenol	5	U I
95-48-7	2-Methylphenol	5	{U {
108-60-1	2,2'-oxybis(1-Chloropropane)	5	ן טן
	4-Methylphenol	5	ן טן
621-64-7	N-Nitroso-di-n-propylamine	5	U
67-72-1	Hexachloroethane	5	lu l
	Nitrobenzene	. 5	U
78-59-1	Isophorone	5	U
	2-Nitrophenol	5	lu l
105-67-9	2,4-Dimethylphenol	5	U
	bis(2-Chloroethoxy)methane	5	U
	2,4-Dichlorophenol	5	U
	Naphthalene	5	lυ
	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	5	ן ט
	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	ט ו
	2-Chloronaphthalane	5	U
	2-Nitroaniline	20	U
	Dimethylphthalate		Ū
	Acenaphthylene	5	Ū
	2,6-Dintrotoluene	5	Ū
99-09-2	3-Nitroaniline	20	Ū
	Acenaphthene	5	Ū
		_	

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EOOFE

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6042.004

Date Received: 04/29/00

Lab File ID: H1027

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
		1	
i   51-28-5	2,4-Dinitrophenol	20	ប
100-02-7	4-Nitrophenol	20	
132-64-9	Dibenzofuran		Ū
121-14-2	2,4-Dinitrotoluene	5	U
	Diethylphthalate		<b>ט</b>
	4-Chlorophenyl-phenylether	5	U
	Fluorene	5	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
	N-Nitrosodiphenylamine (1)	5	U
	4-Bromophenyl-phenylether		U
	Hexachlorobenzene		U
1 87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene		ן ט
120-12-7	Anthracene	5	ן ט
1 84-74-2	Di-n-butylphthalate	5	ן ט
	Fluoranthene	5	U
129-00-0	Pyrene	5	U ¦
	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	5	U
56-55-3	Benzo(a)anthracene	5	U
218-01-9	Chrysene		U ¦
	bis(2-Ethylhexyl)phthalate		U
117-84-0	Di-n-octylphthalate	5	ן ט
205-99-2	Benzo(b) fluoranthene	5	ן ט
207-08-9	Benzo(k)fluoranthene	5	U {
50-32-8	Benzo(a)pyrene	5	U
193-39-5	Indeno(1,2,3-cd)Pyrene	5	U
53-70-3	Dibenz(a,h)anthracene	5	U
191-24-2	Benzo(g,h,i)perylene	5	ן ט

## TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EOOFE

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6042.004

Date Received: 04/29/00

Lab File ID: H1027

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000541-02-	Cyclopentasiloxane, deca Dodecanoic acid	30.15 18.02	13  20	JN JN
4. 5.				
6. 7.				
9.				
11				
14.   15.				
17.				
19. 20. 21.				
22.				
25.				
27   28   29.				
30.				



1LCB EPA SAMPLE NO. LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

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EDCG0

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.002 Date Received: 04/28/00

Lab File ID: H1012 Date Extracted: 05/03/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
100 05 0	Dhanal		U
108-95-2	bis(2-Chloroethyl)ether	•	U
	2-Chlorophenol	•	U
I	2-Chiorophenol	!	U
	2,2'-oxybis(1-Chloropropane)		U
		:	U I
	4-Methylphenol	· ·	U
	Hexachloroethane	!	U
	Nitrobenzene	I .	U !
		!	10 I
	Isophorone	!	U I
	2-Nitrophenol	•	U
	2,4-Dimethylphenol	•	-
	bis(2-Chloroethoxy)methane	!	U
	2,4-Dichlorophenol	;	U
	Naphthalene	•	U
•	4-Chloroaniline	!	U
•	Hexachlorobutadiene	:	U
	4-Chloro-3-methylphenol	•	ָּט
	2-Methylnaphthalene	, -	U
	Hexachlorocyclopentadiene	•	U
	2,4,6-Trichlorophenol	•	U
	2,4,5-Trichlorophenol	20	
	2-Chloronaphthalane		Ŭ
•	2-Nitroaniline	20	: - :
	Dimethylphthalate	5	U
	Acenaphthylene	5	ט
	2,6-Dintrotoluene	· -	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	5	U
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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCG0

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Date Received: 04/28/00

Lab Sample ID: 6040.002

Lab File ID: H1012

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
51-28-5 100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 84-74-2 206-44-0 129-00-0 85-68-7 91-94-1 56-55-3 218-01-9 117-81-7 117-84-0 205-99-2 207-08-9 50-32-8 193-39-5	2,4-Dinitrophenol4-Nitrophenol4-NitrophenolDibenzofuran2,4-Dinitrotoluene2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenyletherFluorene4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluoranthene	20 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	0 0 0 0 0 0 0 0 0 0 0
	Benzo(g,h,i)perylene		Ū

EDCG0

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

## TENTATIVELY IDENTIFIED COMPOUNDS

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Date Received: 04/28/00

Lab Sample ID: 6040.002

Date Extracted: 05/03/00

Lab File ID: H1012 Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1	-!	_		
2. 3.	_	-		-
4.				
Ţ		_		-
6. 7.		-		-
8.		-		-
9.		_ i		
10.		-		- {
12.		-		-
13.		_		
14.		-		-
15. 16.		_	ļ	-
17.		-		-
18.		_ i		
19. 20.		_		-   ——
21		-		-
22.		-		
23.		_		
24. 25.		_	ļ	-
26.		-		-
27.		_		
28.		_		-
29. 30.	<u> </u>	_	<u> </u>	-
		-		-ii

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG2

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCGO

Lab Sample ID: 6040.004

Date Received: 04/28/00

Lab File ID: H1013

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

			CONCENTRATION	
	CAS NO.	COMPOUND	(ug/L)	Q
1	108-95-2	Phonol	c	U
1		bis(2-Chloroethyl)ether		ט
ļ		2-Chlorophenol		U
1		2-Methylphenol	<u>.</u> 5	
1		-2.2'-oxybis(1-Chloropropane)	; 	! • !
1		4-Methylphenol	:	U I
!		-N-Nitroso-di-n-propylamine	; ! 5	-
. !		Hexachloroethane	5	
ļ		Nitrobenzene	5	: :
ļ	78-59-1		5	
į	88-75-5		5	: -
į		-2,4-Dimethylphenol	5	-
į		-bis(2-Chloroethoxy)methane	5	-
į		-2,4-Dichlorophenol	5	-
į	91-20-3		5	
i		-4-Chloroaniline	5	- :
į		-Hexachlorobutadiene	5	
į		-4-Chloro-3-methylphenol	5	ט
1		-2-Methylnaphthalene	5	U
Ì		-Hexachlorocyclopentadiene	5	U
i	88-06-2	2,4,6-Trichlorophenol	5	U
ŀ		-2,4,5-Trichlorophenol	20	U
ŀ	91-58-7	-2-Chloronaphthalane	5	U
ŀ	88-74-4	-2-Nitroaniline	20	ן ט
ł	131-11-3	Dimethylphthalate	5	ן ט
1	208-96-8	Acenaphthylene	5	ן ט
ŀ	606-20-2	-2,6-Dintrotoluene	5	U
i	99-09-2	-3-Nitroaniline	20	U
1	83-32-9		5	U
				_

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG2

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Date Received: 04/28/00 Lab Sample ID: 6040.004

Date Extracted: 05/03/00 Lab File ID: H1013

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
	0.4.7: 14.4.2		

	CAS NO.	COMPOUND	(ug/L)	Q
	51-28-5	2,4-Dinitrophenol	20	U
į		1-Nitrophenol	20	U
į	132-64-9		5	U
i		2,4-Dinitrotoluene	5	
İ		Diethylphthalate	5	U
İ		-Chlorophenyl-phenylether	5	ט ו
İ	86-73-7		5	U
İ	100-01-6	1-Nitroaniline	20	U
İ	534-52-1	1,6-Dinitro-2-methylphenol	20	U
İ		N-Nitrosodiphenylamine (1)	5	U
Ì		a-Bromophenyl-phenylether	5	U
İ	118-74-1	Hexachlorobenzene	5	ប
İ	87-86-5	Pentachlorophenol	20	U
1	85-01-8	Phenanthrene	5	U
1	120-12-7	Anthracene	5	ט
į	84-74-2	Di-n-butylphthalate	5	ប
-	206-44-0	Fluoranthene	5	U
1	129-00-0	Pyrene	5	U
1		Butylbenzylphthalate !	5	U
-		3,3'-Dichlorobenzidine	5	ប
1	56-55-3	Benzo(a)anthracene	5	ប
1	218-01-9	Chrysene	5	U
-	117-81-7	ois(2-Ethylhexyl)phthalate	5	U
-	117-84-0	Di-n-octylphthalate	5	U
ł	205-99-21	Benzo(b)fluoranthene	5	ប
1	207-08-9	Benzo(k)fluoranthene	5	U
i	50-32-8	Benzo(a)pyrene		U
-	193-39-5	Indeno(1,2,3-cd)Pyrene	5	ប
1	53-70-3	Dibenz(a,h)anthracene		U
-	191-24-2	Benzo(g,h,i)perylene	5	ט
-		1		

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCG2

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCGO

Lab Sample ID: 6040.004

Date Received: 04/28/00

Lab File ID: H1013

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1				
3 ·				<u> </u>
Ξ. 				
7.				
9				
10.				<u> </u>
12.				
14.				
18.		İ		
19.   20.				
21.				
23.				
25.				
26. 27.				
28. 29.				
30.				

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG4

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.005 Date Received: 04/28/00

Lab File ID: H1014 Date Extracted: 05/03/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION

CAS NO.	COMPOUND	(ug/L)	Q
108-95-2	Phenol	5	U
111-44-4	bis(2-Chloroethyl)ether	5	U
	2-Chlorophenol	<b>\</b> 5	ן ט
95-48-7	2-Methylphenol	5	U
108-60-1	2,2'-oxybis(1-Chloropropane)	5	ן ט ן
106-44-5	4-Methylphenol	<b>\</b> 5	ן ט
	N-Nitroso-di-n-propylamine	<b>!</b> 5	U
	Hexachloroethane	5	U
	Nitrobenzene	5	ן ט
	Isophorone	<b> </b>	U
	2-Nitrophenol	5	U
	2,4-Dimethylphenol	<b>!</b> 5	U :
	bis(2-Chloroethoxy) methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
	Naphthalene	5	U
	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	5	U
•	4-Chloro-3-methylphenol	5	U
	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U i
	2,4,6-Trichlorophenol	5	ט ו
95-95-4	2,4,5-Trichlorophenol	20	<u>י</u>
91-58-7	2-Chloronaphthalane	•	U
88-74-4	2-Nitroaniline	20	ប
	Dimethylphthalate	i .	Ū
	Acenaphthylene	-	Ū
	2,6-Dintrotoluene	5	U
99-09-2	3-Nitroaniline	20	
	Acenaphthene		U

EPA SAMPLE NO. LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG4

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCGO

Lab Sample ID: 6040.005 Date Received: 04/28/00

Date Extracted: 05/03/00 Lab File ID: H1014

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

100-02-74-Nitrophenol 2 132-64-9Dibenzofuran 121-14-22,4-Dinitrotoluene 84-66-2Diethylphthalate	0 0 5 5 5 5 5	ם ט ט ט
100-02-74-Nitrophenol	0 5 5 5 5	ם ט ט ט
100-02-74-Nitrophenol	0 5 5 5 5	ם ט ט ט
100-02-74-Nitrophenol	5 5 5 5	ט ט ט
132-64-9Dibenzofuran	5 5	ם ט ט
84-66-2Diethylphthalate	5   5	บ บ
84-66-2Diethylphthalate	5	U
7005 72 2 4 Chlorenhamil phonilathor	- :	-
1 /005-/2-54-Chiotophenyi-phenyiether 1	5 !	
	_ ,	U
100-01-64-Nitroaniline   2	0	U
534-52-14,6-Dinitro-2-methylphenol   2	0	U
· · · · · · · · · · · · · · · · · · ·	5	U
	5	U
1	5	U
· · · · · · · · · · · · · · · · · · ·	0	U
· · · · · · · · · · · · · · · · · · ·	5	
120-12-7Anthracene	5	U i
84-74-2Di-n-butylphthalate	5 İ	u i
	5	U
129-00-0Pyrene	5	U
	5	U
	5 İ	U
	5	ָּט וֹ
	5 İ	U
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<u> </u>	5	Ū
	5	U
207-08-9Benzo(k) fluoranthene	5	U
50-32-8Benzo(a)pyrene	5	U
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCG4

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.005 Date Received: 04/28/00

Lab File ID: H1014 Date Extracted: 05/03/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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26.		<u> </u>		ii
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28.		i	i	1
29.		i	1	ii
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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCG5

Date Received: 04/28/00

Lab Sample ID: 6040.006

Lab File ID: H1015

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
108-95-2 111-44-4 95-57-8 95-48-7 108-60-1 106-44-5 621-64-7 98-95-3 98-95-3 105-67-9 111-91-1 120-83-2 111-91-1 120-83-2 91-20-3 106-47-8 87-68-3 91-57-6 91-57-6 91-57-6 91-58-7 91-58-7 91-58-7 131-11-3 208-96-8	Phenol	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם
	3-NitroanilineAcenaphthene	20 5	บ บ

EPA SAMPLE NO. LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCG5

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Date Received: 04/28/00 Lab Sample ID: 6040.006

Date Extracted: 05/03/00 Lab File ID: H1015

Date Analyzed: 05/12/00 Sample Volume: 1000 (mL)

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
		T	
51-28-5	2,4-Dinitrophenol	20	
100-02-7	4-Nitrophenol	20	U
	Dibenzofuran	. •	U
121-14-2	2,4-Dinitrotoluene	5	ן ט
	Diethylphthalate	5	U
	4-Chlorophenyl-phenylether_	. }	U
	Fluorene	. 1 5	U
	4-Nitroaniline	20	U
	4,6-Dinitro-2-methylphenol		U
	N-Nitrosodiphenylamine (1) $\overline{}$		U
101-55-3	4-Bromophenyl-phenylether	5	U
	Hexachlorobenzene	· •	U
87-86-5	Pentachlorophenol	20	U
	Phenanthrene		U
120-12-7	Anthracene		រប រ
84-74-2	Di-n-butylphthalate	·	U
206-44-0	Fluoranthene		ן ט
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	· <b>!</b> 5	ט
91-94-1	3,3'-Dichlorobenzidine	5	U
	Benzo(a)anthracene	5	ט
	Chrysene		ប
117-81-7	bis(2-Ethylhexyl)phthalate	5	U
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b) fluoranthene		<b>U</b>
	Benzo(k) fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	U
193-39-5	Indeno(1,2,3-cd)Pyrene	5	U
53-70-3	Dibenz(a,h)anthracene	5	U
191-24-2	Benzo(g,h,i)perylene	5	U
			: :

## TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.006

Date Received: 04/28/00

Lab File ID: H1015

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.			 	
2.	1			
3.		-	<u></u>	<u>  </u>
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19.				
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23.		<u> </u>	Í	
24. 25.		ļ	i	
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27.			!	ii
28.				i
29.		i ———		ii
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		1		

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCGO

Lab Sample ID: 6040.007

Date Received: 04/28/00

Lab File ID: H1016

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION

CAS NO. COMPOUND (ug/L) Q

108-95-2Phenol 111-44-4bis(2-Chloroethyl)ether 95-57-82-Chlorophenol 95-48-72-Methylphenol 108-60-12,2'-oxybis(1-Chloropropane) 106-44-54-Methylphenol 621-64-7N.Nitroso-di-n-propylamine 67-72-1Hexachloroethane 98-95-3Nitrobenzene 78-59-1Isophorone 88-75-52-Nitrophenol 105-67-92,4-Dimethylphenol 111-91-1bis(2-Chloroethoxy)methane 120-83-22,4-Dichlorophenol 91-20-3Naphthalene 106-47-8	5 5 5 5 5 5 5 5 5 5 2 0 5 5 5 5 5 5 5 5	מממממממממממממממממממממ
88-74-42-Nitroaniline	20	Ū
208-96-8Acenaphthylene 606-20-22,6-Dintrotoluene	5	U
99-09-23-Nitroaniline 83-32-9Acenaphthene	20 5	_

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCG6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.007

Date Received: 04/28/00

Lab File ID: H1016

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

CONCENTRATION

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	(ug/L)	Q
51-28-5	2,4-Dinitrophenol	20	U
	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	5	U
121-14-2	2,4-Dinitrotoluene	5	U
	Diethylphthalate	5	ĮŪ
	4-Chlorophenyl-phenylether_	5	Įυ
	Fluorene	5	U
100-01-6	4-Nitroaniline	20	Ū
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	N-Nitrosodiphenylamine (1)	5	U
	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
1 87-86-5	Pentachlorophenol	20	ľυ
85-01-8	Phenanthrene	5	U
120-12-7	Anthracene	5	lυ
84-74-2	Di-n-butylphthalate	5	U
1 206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	5	ΙU
	Benzo(a)anthracene	5	U
	Chrysene	5	ľυ
117-81-7	bis(2-Ethylhexyl)phthalate	5	ΙU
	Di-n-octylphthalate	5	¦∪
205-99-2	Benzo(b) fluoranthene	5	U
207-08-9	Benzo(k)fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	U
193-39-5	Indeno(1,2,3-cd)Pyrene	5	U
53-70-3	Dibenz(a,h)anthracene	5	U
191-24-2	Benzo(g,h,i)perylene	5	U
1			1

## TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCG6

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.007

Date Received: 04/28/00

Lab File ID: H1016

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDCG7

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCGO

Lab Sample ID: 6040.008

Date Received: 04/28/00

Lab File ID: H1017

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

CAS NO. COMPOUND

CONCENTRATION	
(ug/L)	0

108-95-2Phenol 111-44-4bis(2-Chloroethyl)ether 95-57-82-Chlorophenol 95-48-72-Methylphenol 108-60-12,2'-oxybis(1-Chloropropane) 106-44-54-Methylphenol 621-64-7N-Nitroso-di-n-propylamine 67-72-1Hexachloroethane 98-95-3Nitrobenzene 78-59-1Isophorone 88-75-52,4-Dimethylphenol 111-91-1bis(2-Chloroethoxy)methane	5 5 5 5 5 5 5 5 5	ע ע ע ע ע ע
111-44-4bis (2-Chloroethyl) ether	5 5 5 5 5 5	บ บ บ บ บ
95-57-82-Chlorophenol 95-48-72-Methylphenol 108-60-12,2'-oxybis(1-Chloropropane) 106-44-54-Methylphenol 621-64-7N-Nitroso-di-n-propylamine 67-72-1Hexachloroethane 98-95-3Nitrobenzene 78-59-1Isophorone 88-75-52-Nitrophenol 105-67-92,4-Dimethylphenol	5 5 5 5 5 5	บ บ บ บ บ
95-48-72-Methylphenol  108-60-12,2'-oxybis(1-Chloropropane)  106-44-54-Methylphenol  621-64-7N-Nitroso-di-n-propylamine  67-72-1Hexachloroethane  98-95-3Nitrobenzene  78-59-1Isophorone  88-75-52-Nitrophenol  105-67-92,4-Dimethylphenol	5 5 5 5	บ บ บ บ
106-44-54-Methylphenol	5 5 5 5	U U U
106-44-54-Methylphenol	5 5 5	U U
621-64-7N-Nitroso-di-n-propylamine   67-72-1Hexachloroethane   98-95-3Nitrobenzene   78-59-1Isophorone   88-75-52-Nitrophenol   105-67-92,4-Dimethylphenol	5 5	U
67-72-1	5	
98-95-3Nitrobenzene		1
88-75-52-Nitrophenol	<u> </u>	iU
88-75-52-Nitrophenol	ا د	Ų
	5	U
111-91-1bis(2-Chloroethoxy)methane	5	U
	5	U
120-83-22,4-Dichlorophenol	5	U
91-20-3Naphthalene	5	U
106-47-84-Chloroaniline	5	U
87-68-3Hexachlorobutadiene	5	U
59-50-74-Chloro-3-methylphenol	5	U
91-57-62-Methylnaphthalene	5	ľυ
77-47-4Hexachlorocyclopentadiene	5	U
88-06-22,4,6-Trichlorophenol	5	U
95-95-42,4,5-Trichlorophenol	20	U
91-58-72-Chloronaphthalane	5	U
88-74-42-Nitroaniline	20	υ¦
131-11-3Dimethylphthalate	5	U
208-96-8Acenaphthylene	5	ľυ
606-20-22,6-Dintrotoluene	5	U
99-09-23-Nitroaniline	20	U
83-32-9Acenaphthene	5	U

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG7

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.008

Date Received: 04/28/00

Lab File ID: H1017

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
100-02-7	2,4-Dinitrophenol4-Nitrophenol4-Dibenzofuran2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenyletherFluorene4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluorantheneButylbenzylphthalateButylbenzylphthalateButylbenzylphthalateBenzo(a) anthracenebis(2-Ethylhexyl) phthalate	20 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	0 UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU
		_	

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCG7

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.008

Date Received: 04/28/00

Lab File ID: H1017

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		!		_[]
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

CONCENTRATION

Lab Sample ID: 6040.010 Date Received: 04/28/00

Lab File ID: H1018 Date Extracted: 05/03/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

	CAS NO.	COMPOUND	(ug/L)	Q
1	108-95-2		· -	U
ì	111-44-4	bis(2-Chloroethyl)ether	5	U
ļ		2-Chlorophenol	•	U
-		2-Methylphenol	5	U
ļ	108-60-1	2,2'-oxybis(1-Chloropropane)	5	U
i	106-44-5	4-Methylphenol	•	U
1	621-64-7	N-Nitroso-di-n-propylamine_	5	U
i	67-72-1	Hexachloroethane	5	U
ŀ	98-95-3	Nitrobenzene	5	ן ט
1	78-59-1	Isophorone	5	U
ı	88-75-5	2-Nitrophenol	5	ן ט
i	105-67-9	2,4-Dimethylphenol	•	U
ŀ	111-91-1	bis(2-Chloroethoxy)methane		U
1	120-83-2	2,4-Dichlorophenol	5	U [
ļ	91-20-3	Naphthalene	5	U
i	106-47-8	4-Chloroaniline	1 5	U
	87-68-3	Hexachlorobutadiene	5	U l
i		4-Chloro-3-methylphenol	1 5	U !
1	91-57-6	2-Methylnaphthalene	5	U
į	77-47-4	Hexachlorocyclopentadiene	5	ן ט
1	88-06-2	2,4,6-Trichlorophenol	5	U
- }	95-95-4	2,4,5-Trichlorophenol	20	U
Í	91-58-7	2-Chloronaphthalane	5	U
-		2-Nitroaniline	20	U
1	131-11-3	Dimethylphthalate	5	ן ט
- 1	208-96-8	Acenaphthylene	5	U
i	606-20-2	2,6-Dintrotoluene	5	U
İ	99-09-2	3-Nitroaniline	20	U
i	83-32-9	Acenaphthene	1 5	U
- 1			1	1 1

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.010 Date Received: 04/28/00

Lab File ID: H1018 Date Extracted: 05/03/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
51-28-5	2,4-Dinitrophenol	20	iii i
100-02-7	4-Nitrophenol	20	, -
132-64-9	Dibenzofuran		lū i
	2,4-Dinitrotoluene	5	lu i
	Diethylphthalate		U
	4-Chlorophenyl-phenylether_	5	U
86-73-7	Fluorene	5	U
	4-Nitroaniline	20	U
	4,6-Dinitro-2-methylphenol		U
	N-Nitrosodiphenylamine (1)		ן ט ן
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U l
87-86-5	Pentachlorophenol	20	ן טן
85-01-8	Phenanthrene	5	U
	Anthracene	5	U }
84-74-2	Di-n-butylphthalate	5	U
	Fluoranthene		U
	Pyrene	<b>i</b> 5	U
	Butylbenzylphthalate		U
91-94-1	3,3'-Dichlorobenzidine	5	U
56-55-3	Benzo(a)anthracene	5	U
	Chrysene		U
	bis(2-Ethylhexyl)phthalate		
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b) fluoranthene	5	U
207-08-9	Benzo(k)fluoranthene	5	U
50-32-8	Benzo(a)pyrene		! - !
193-39-5	Indeno(1,2,3-cd)Pyrene	. ! 5	U
53-70-3	Dibenz(a,h)anthracene	. 1 5	U
191-24-2	Benzo(g,h,i)perylene	5	ן ט
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## TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EDCG8

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.010

Date Received: 04/28/00

Lab File ID: H1018

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.				
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG9

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.011

Date Received: 04/28/00

Lab File ID: H1019

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
108-95-2		:	U
	bis(2-Chloroethyl)ether	•	U
I	2-Chlorophenol	;	U
	2-Methylphenol	i	U į
	2,2'-oxybis(1-Chloropropane)	:	U
	4-Methylphenol	5	U
	N-Nitroso-di-n-propylamine	5	U
67-72-1	Hexachloroethane	5	Ŭ
98-95-3	Nitrobenzene	5	U
	Isophorone	5	U
	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	1 5	U
91-20-3	Naphthalene	5	U !
106-47-8	4-Chloroaniline	! 5	U !
	Hexachlorobutadiene	1 5	U ¦
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U !
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalane	<b>!</b> 5	U
1 88-74-4	2-Nitroaniline	20	U
	Dimethylphthalate	5	i u
208-96-8	Acenaphthylene	· -	Ū
606-20-2	2,6-Dintrotoluene	· -	Ū
99-09-2	3-Nitroaniline	20	
83-32-9	Acenaphthene	1	บ
		i	

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EDCG9

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: 6040.011 Date Received: 04/28/00

Lab File ID: H1019 Date Extracted: 05/03/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 120-12-7 129-00-0 85-68-7 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 129-00-0 117-81-7 117-84-0 117-84-0 117-84-0 1205-99-2 193-39-5 193-39-5	2,4-Dinitrophenol4-Nitrophenol2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenylether4-Nitroaniline4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorophenolPentachlorophenolPhenanthreneDi-n-butylphthalateFluorantheneButylbenzylphthalateButylbenzylphthalate	20 20 5 5 5 5 20 20 5 5 5 5 5 5 5 5 5 5	ם ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט
		i	

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: EDCG0

Lab Sample ID: 6040.011

Date Received: 04/28/00

Lab File ID: H1019

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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#### 1LCB

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SLCS70

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: SVOL602 Date Received:

Lab File ID: H1011 Date Extracted: 05/03/00

Sample Volume: 1000 (mL) Date Analyzed: 05/12/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection · Volume: 1.0 (uL)

CONCENTRATION

CAS NO.	COMPOUND	(ug/L)	Q
108-95-2	Phenol	3	0
111-44-4	bis(2-Chloroethyl)ether	1	7
	2-Chlorophenol	3	3
95-48-7	2-Methylphenol		5   U
	2,2'-oxybis(1-Chloropropane)		5 U
	4-Methylphenol		5 U
	N-Nitroso-di-n-propylamine	1	6
67-72-1	Hexachloroethane		9
98-95-3	Nitrobenzene		5   U
78-59-1	Isophorone	1	2
	2-Nitrophenol		5   U
105-67-9	2,4-Dimethylphenol		5 U
111-91-1	bis(2-Chloroethoxy)methane		5   U
120-83-2	2,4-Dichlorophenol		5 U
91-20-3	Naphthalene	1	6
106-47-8	4-Chloroaniline	2	8
87-68-3	Hexachlorobutadiene		5   U
1 59-50-7	4-Chloro-3-methylphenol		5   U
91-57-6	2-Methylnaphthalene		5 U
	Hexachlorocyclopentadiene		5   U
	2,4,6-Trichlorophenol	3	3
	2,4,5-Trichlorophenol	2	0 U
91-58-7	2-Chloronaphthalane		5 U
88-74-4	2-Nitroaniline	2	0 0 1
	Dimethylphthalate		5 U
	Acenaphthylene		5 U
	2,6-Dintrotoluene		5 U
99-09-2	3-Nitroaniline	2	O U
83-32-9	Acenaphthene		5 U
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Lockheed Martin Services Group Environmental Services & Technologies Region 5 536 South Clark Street #1050 Chicago, IL 60605 Telephone 3 \( \frac{1}{2} \)-353-8302 Facsimile 312-353-8307

LOCKHEED MARTIN

Date: June 23, 2000

To: Richard Byvik EPA WAM

From: W. Ira Wilson, ESAT Chemist

Thru: Ziyad Rajabi, ESAT Keam Manager

Copies: W. Ira Wilson, ESAT Organic Group Leader

Jay Thakkar, ESAT Contract RPO

Ref:

TDF# 5207-1029

WA# 05-00-4-07

Contract # 68D60002

SUBJECT:

Organic Data Review for Case 2986; SDG # EDCG0. Volatile and

3

Semivolatile Analyses Using SOW OLC02.1(Low Conc. Analysis).

Attached is the deliverable for Case 27986, SDG EDGO of Volatile and Semivolatile analysis for seventeen (17) water samples. Included in the deliverable is the Manually prepare case narrative. If you have any question please feel free to contact Ira Wilson; 312/353-2947.

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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SLCS70

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

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Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: EDCG0

Lab Sample ID: SVOL602

Date Received: \_\_\_\_

Lab File ID: H1011

Date Extracted: 05/03/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/12/00

CONCENTRATION

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

	CAS NO.	COMPOUND	(ug/L)	Q
		2,4-Dinitrophenol	20	
į		4-Nitrophenol	20	: :
. į		Dibenzofuran	-	ָּט
į		2,4-Dinitrotoluene	12	. — .
1		Diethylphthalate	14	: :
į		4-Chlorophenyl-phenylether	•	U
į	86-73-7			ט
į		4-Nitroaniline	20	ן ט
ļ		4,6-Dinitro-2-methylphenol	20	ט
1		N-Nitrosodiphenylamine (1)	14	ll
		4-Bromophenyl-phenylether	5	U
	118-74-1	Hexachlorobenzene	14	
	87-86-5	Pentachlorophenol	20	l U
- 1	85-01-8	Phenanthrene	5	U
	120-12-7	Anthracene	5	ן ט
	84-74-2	Di-n-butylphthalate	5	ן טן
		Fluoranthene	1 5	U
	129-00-0	Pyrene	5	U
-		Butylbenzylphthalate	5	וֹ עוֹ
		3,3'-Dichlorobenzidine	5	TU I
		Benzo(a) anthracene	•	Ū
	218-01-9		I .	ָיַ וֹ <u>י</u>
į		bis(2-Ethylhexyl)phthalate		Ū İ
		Di-n-octylphthalate	5	Ū
		Benzo(b) fluoranthene	-	Ü
		Benzo(k) fluoranthene	-	Ū
!		Benzo(a)pyrene	15	
		Indeno(1,2,3-cd) Pyrene	•	<u> </u>
	! 52-70-2	Dibenz(a,h)anthracene	:	יט ט
		Benzo(q,h,i)perylene	;	ָ ט
		Benzo(g, n, r) peryrene	) 	1 1
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(1) - Cannot be separated from Diphenylamine

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	
SUBJECT:	Review of Data  Received for Review on 5-23-00
FROM:	Stephen L. Ostrodka, Chief (SMF-4J) for Attroduce.  Superfund Field Services Section Military & Bigners  C) 27/10
TO:	Data User: USEPA G127/10
We have revi	ewed the data for the following case:
SITE NAME	HIMCO SUMP (IN)
CASE NUME	BER: 27986 SDG NUMBER: EOOFL
Number and	Type of Samples: 19 (WATER)
Sample Num	POP EOITP-Q, ECFN2-6, ECFN8-9, ECFP1 Hrs for Review: 12.5
Following are	our <u>findings</u> :
the date	ai usualland acceptable evity the
ulfic	ations discilled in the attenders inventor
•	Mund & Byrith

Lockheed Martin Services Group Environmental Services & Technologies Region 5 536 South Clark Street #1050 Chicago, IL 60605 Telephone 312-353-8302 Facsimile 312-353-8307



Date: June 23, 2000

To: Richard Byvik, EPA WAM

From: W. Ira Wilson, ESAT Chemist

Thru: Ziyad Rajabi, ESAT Team Manager

Copies: W. Ira Wilson, ESAT Organic Group Leader

Jay Thakkar, ESAT Contract RPO

Ref: TD!

TDF# 5207-1033 WA# 05-00-4-07 Contract # 68D60002

SUBJECT: Organic Data Review for Case 27986; SDG # E00FL. Volatile and Semivolatile

\*

Analyses Using SOW OLC02.1(Low Conc. Analysis).

Attached is the deliverable for Case 27986, SDG E00FL of Volatile and Semivolatile analysis for nineteen (19) water samples. Included in the deliverable is the Manually prepare case narrative. If you have any question please feel free to contact Ira Wilson; 312/353-2947.

MW 2060 Voc 3 + S VOCs

#### NARRATIVE

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LABORATORY: PDP ANALYTICAL SRVs.

CASE: 27986

SDG: E00FL

SITE: HIMCO LANDFILL

Page 2 of 9

This review covers nineteen (19) low concentration water samples, numbered E00FL, E00FF - E00FH, E00FJ, E00FK, E00F4 - E00F6, E01TP, E01TQ, ECFN2 - ECFN9, and ECFP1, were collected on 05/1, 2 and 3/2000. The PDP Analytical Services, of Woodland, TX received the samples on 05/5/2000, in good condition. The samples were analyzed for low concentration VOAs and SVOAs. All samples were analyzed per CLP SOW OLC02.1.

Laboratory Control Samples (LCS) Identified as VLCS65, VLCS66, VLCS02 and VLCS03 (VOAs) and SLCS73 and SLCS76 (SVOAs) were analyzed in place of matrix spike/matrix spike duplicate (MS/MSD) samples.

The VOA samples were analyzed within the holding time of fourteen (14) days for preserved water samples and the SVOA samples were extracted within the required holding time of seven days. The analysis of the semivolatile extracts were performed within forty (40) days. Therefore, the results for the VOA and SVOA fractions are acceptable.

The reviewer's narrative and data qualifiers are noted in the following pages.

Reviewed by: W. Ira Wilson\_Lockheed Martin/ESAT

Date:\_\_June 23 , 2000

4

LABORATORY: PDP ANALYTICAL SRVs.

Page of 9

CASE: 27986

SDG: E00FL

SITE: HIMCO LANDFILL

Below is a summary of the out-of-control audits and the possible effect on the data for this case.

#### . 1. HOLDING TIME

This review covers nineteen (19) low concentration water samples, numbered EOOFL, EOOFF - EOOFH, EOOFJ, EOOFK, EOOF4 - EOOF6, EO1TP, E01TQ, ECFN2 - ECFN9, and ECFP1, were collected on 05/1, 2, and 3/2000. The PDP Analytical Services, of Woodland, TX received the samples on 05/5/2000 in good condition. The samples were analyzed for low concentration VOAs and SVOAs. All samples were analyzed per CLP SOW OLC02.1.

The VOA samples were analyzed within the holding time of fourteen (..4) days for preserved water samples; therefore, the results are acceptable.

The SVOA samples were extracted within the holding time of seven (7) days. The extracts were promptly analyzed within the required 40 days criteria. Therefore; the results are acceptable.

#### 2. GC/MS TUNING AND GC PERFORMANCE

GC/MS tuning complied with the mass list and ion abundance criteria for BFB and DFTPP.

#### 3. CALIBRATION

Initial and continuing calibration standards of VOA and SVOA were evaluated for the Target Compounds List (TCL) and outliers were recorded on the outlier forms included as a part of this narrative.

#### 4. METHOD BLANK

Blanks VBLK65, VBLK66, VBLK02 and VBLK03 are the low concentration water Volatile Method Blanks. The Method Blanks were clean, no TCLs or TICs reported. Blank VHBLK01 is identified as a Holding Blank sample which was also clean.

Reviewed by: W. Ira Wilson Lockheed Martin/ESAT

Date: June 23 , 2000

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LABORATORY: PDP ANALYTICAL SRVs.

CASE: 27986

Page4 of 9

SDG: E00FL

SITE: HIMCO LANDFILL

Blank SBLK44 and SBLK47 are the low conc. water Semivolatile Method Blanks. The Blanks reported no TCLs and no TICs.

Please refer to Form-IV LCV and Form-IV LCSV for a list of associated samples.

#### 5. SURROGATE RECOVERY AND SYSTEM MONITORING COMPOUNDS

The low concentration recovery of the system monitoring spiking Compound (BFB = Bromofluorobenzene) for the volatile analysis and the surrogate compounds for the semivolatile analysis met the required QC limits for all samples; therefore, all results are acceptable.

#### 6 MATRIX SPIKE/MSD SAMPLES

A Laboratory Control (LCS) Samples identified as VLCS65, VLCS66, VLCS02 and VLCS03 (for volatiles) and SLCS73 and SLCS76 (for semivolatiles) were used in place of a matrix spike/matrix spike duplicate sample for the low concentration analysis. All spike recoveries were within the QC limits; therefore, the results are acceptable.

#### 7. FIELD BLANK AND FIELD DUPLICATE

No samples were identified as Trip Blanks, Field Blanks or Duplicates. Results are not qualified based upon the results of the Field Blanks or Duplicates.

#### 8. INTERNAL STANDARDS

The internal standard retention times and area counts for the low concentration volatile and semivolatile samples were within the required QC limits; therefore, the results are acceptable.

#### 9. COMPOUND IDENTIFICATION

Reviewed by: W. Ira Wilson Lockheed Martin/ESAT

Date: June 23 , 2000

#### NARRATIVE

LABORATORY: PDP ANALYTICAL SRVs.

Page5 of 1

SDG: E00FL

CASE: 27986

SITE: HIMCO LANDFILL

Target compounds and TICs were correctly identified by "best fit" library search method.

#### 10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

VOA and SVOA Target Compounds (TCLs) and Tentative Identified Compounds (TICs) were properly quantitated; therefore, the results are acceptable.

#### 11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

GC baseline for pest/PCB analysis indicated acceptable performance.

#### 12. ADDITIONAL INFORMATION

None.

Reviewed by: W. Ira Wilson Lockheed Martin/ESAT

Date: \_\_June 23 , 2000

CALIBRATION OUTLIERS

LOW CONCENTRATION WATER VOLATILE TCL COMPOUNDS

(page 1 of 1)

LABORATORY POP ANDLY TICA L SITENAME THE COLLANDELLE

Contin cal Contin Cal. Contin Cal Contin Cal Initial cal. FHP 5973 %ರ 3/a/d Chloromethane Bromethane 0.10 /invl chlonde 0.10Chloroethane 0.01 Methylene chloride 0.01 Acetone 0.01 Carbon disulfide IO 01 1,1-Dichloroethene 0.10 0.100 25 4 5 0,308 0.323 1.1-Dichloroethane 0.20 cis-1,2-Dichloroethene 0.10 trans-1,2-Dichloroethene 0 10 Chiroform 0.20 1.2-Dichloroethane 0.10 2-Butanone 0,021 30.0 0.01 0,530 0.030 Sromochloromethane 0.05 0.10 1 1.1-Inchloroethane Carbon tetrachionde 0.10 B-modichloromethane 0.20 1.2-Dichloropropane 0.01 0.296 27.5 0.20 cis-1,3-Dichloropropene 0,408 0.327 Trichloroethene 0.30 Dipromochloromethane 0.10 1.1.2-trichloroethane 0.10 Êenzene 0 40 trans-1,3-Dichlor-propene 0 10 Eromotorm 0.05 :-Methyl-2-Pentanone 0.01 \_-Hexanone 0 01 0691 28.1 01657 0,054 etrachioroethene 0.10 1.1.2.2-Tetrachloroetnane 0 10 .2-Dibromoetnane 0 10 oluene 0 40 Chlorobenzene 0.50 Ethylbenzene 0 10 Styrene 0.30 0.30 > /lene (total) 1 2-Dipromo-3-chioropropane 0.10 0.035 33.5 706 1,3-Dichlorobenzene 0.40 1.4-Dichloropenzene 0.40 1.2-Dichloropenzene 0 40 1.2.4-Inchlorobenzene 2.726 0 40 4-Bromofluorobenzene Samples affected: FOOFE 00

Reviewer's Init/Date 6/22/01

<sup>\*\* =</sup> These flags should be applied to the analytes on the sample data sheets

## CALIBRATION OUTLIERS LOW CONCENTRATION WATER VOLATILE TCL COMPOUNDS

(page 1 of 1)

LABORATORY PDP ANALYTICAL
SITENAME HIMCO LAGINFILL

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Bromethane	0 10													$\bot$		
/inyl chionae	0 10							<u> </u>								
Chloroethane	0 01															
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cetone	0.01	0,011			1.009			0,049	345							
arbon disulfide	0 01															
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is-1,2-Dichloroethene	0 10							<u></u>		L	<u> </u>			ļ		
rans-1,2-Dichloroethene	0 10							<u> </u>	Ĺ	<u></u>						
hiraform	0.20															
.2-Dichloroethane	0.10	I		_											ļ	<u> </u>
2-Butanone	0.01	0,019			0.00			0,040	3 <i>73.</i> 7	13	ļ			<u> </u>		
Bromochioromethane	0 05														<u> </u>	↓
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n tetrachionde	0 10														1	1_
dichioromethane	0.20															
1.2-Dichloropropane	0.01															
cis-1.3-Dichioropropene	0.20														1	
nchloroethene	0.30															
Dibromochloromethane	0.10	Ι														
	0 10															
Benzene	0 40				Ι							1				
rans-1,3-Dichloropropene	0 10					l							<u></u>			
3romatorm	0 05															
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anone	0 01	CICSC			AC53		`	0,277		1						
್ಷಾಕchloroethene	0 10															
.1.2.2-Tetrachloroethane	0 10	1												<u> </u>		
.2-Dipromoethane	0 10															
oluene	0 40	1														
Chlorobenzene	0 50															
thylbenzene	0 10													L		
Styrene	0 30															
(viene (total)	0.30															
1.2-Dibromo-3-chloropropane		Ι										<del></del>	<u> </u>			<u> </u>
.3-Nichlorobenzene	0 40												1			
hloropenzene	0 40	.]														
ichlorobenzene آن- ے, 1	0 40														1	
1.2.4-Trichlorobenzene	0 40													<u> </u>	1	
4-Bromofluorobenzene	0 20				1			1		١		1	1	l	1	İ
Samples affected:		<del></del> 1			1172	116	7	112	115 6	2				T		
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					Eo			FC								
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					EC	<u> </u>	<u> </u>	EU	1 1 6	<u> </u>				<b></b>		
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Reviewer's Init. Date 6/22/08

J/R= All positive results are estimated "J" and non-detected results are unusable "R"

" = These flags should be applied to the analytes on the sample data sheets

- = Minimum Relative Response Factor

# CALIBRATION OUTLIER LOW CONCENTRATION WATER SEMIVOLATILE TCL COMPOUNDS (Page 1 of 2)

Pg 8 of 9

CASE\SAS#: 2 198	6							LAE	BORA	TORY:	Y	) Y	MU	414T	1CA
COLUMN:								SITE	e na	ME:	HIIL	CP	Ly	1/47 FND1	=14
Instrument H- HP 5473	Ī .	Initia	l Cal.	_ Co	ntin. Cal		L Co	ntin. Ca	1.	Co	ntin. Ca	1.	Co	ntin Ca	1
Date/Time:	1	5/2/	26 183	51/4	100-12	129	18/17	100-0	046			1			
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Phenol		1.884		11.371	27.4	1.7	1474	-			Ī			1	1
bis(2-chloroethyl) Ether		11345		0.949	29.4	J	11030	1	1. 1				<u></u>	L	L
2-Chlorophenol	0.70		L	_1			1	1			l	L = 1		1	
2-Methylphenol	10.70	1		Ī	1	Ī	L.		$\overline{1}$			<u> </u>		1	ī i
2,2'-Oxybis(1-chl-propane)	0.01	11112		10,404	164.9	15	0.421	63.1	1.71		1	$\perp -1$		1	T i
4-Methylphenol	0.60			1	1	1	1	1				L		L	
N-nitroso-di-n-propylamine	10.50					Ī	1	1			J	1		]	Ī į
Hexachloroethane	10.30			1	1	1	!				!				
Nitrobenzene	10.20			ī	1	1					!				1
Isophorone	0.40				Ī	ì		ļ	1 1		1			1	i
2-Nitrophenol	10.10			1	ī			1	i		1	1		1	i i
2.4-Dimethylphenol	0.20			ļ į	1	1		<u> </u>	1		1	1 1		1	i
bis-(2-chloroethoxyl)methane				<u> </u>	1	1	Ī	1	1 1		<u> </u>	1 1		Ī	<del>   </del>
2,4-Dichlorophenol	0.20			1	1	Ì	1		1					l	
1,2,4-Trichlorobenzene	10.20	!		<u> </u>	1	T	1	i	1 !		l	! !		!	
Naphthalene	10.70			1	1	!	1	!	1 1		1	1 1		1	
4-Chloroaniline		n.386		10.189	148.4	15	10.143	55.5	177		1	1 1		Ī	
Hexachlorobutadiene		c. 237			B9.9						1	1 1		1	i
4-Chloro-3-methylphenol	10.20	-				1			1		1	1 1		Ī	
2-Methylnaphthalene	10.40	•		ļ		1		1	1		1	1 1		1	!
Hexachlorocyclopentadiene	0.01	0.329	!	10.456	38,4	1-	W.387	1			1	1 1		1	
2,4,6-Trichlorophenol	10.20		1		1			1	1		Ì	1 1		Ī	<del>   </del>
2,4,5-Trichlorophenol	10.20	<del></del>	1 1	1	1	1	i	!	1 1		ı	1 1		1	
2-Chloronaphthalene	0.80	·		1	1	1	<del>                                     </del>	1	1 1		1	1 1		i	<del>   </del>
2-Nitroaniline	0.01		1			1	1	İ	1		!	1 1		<del>†</del>	i
Dimethyl phthlate	10.01		1	1	1	1	1	1	1 1		1	1 1		1	<del>   </del>
Acenaphthylene	11.30		!	<del></del>		1	!	!	1			1 1		1	1
2.6-Dinitrotoluene	10.20		1	1	1	1	1	]	1	·	1	1 1		l	<del>                                     </del>
3-Nitroaniline	10.01	<del></del>	!!!	1	!	!	}		1 !		<u> </u>	1		1	<u> </u>
Acenaphthene	0.30		1 1	1		<del></del>	<del>i</del>	<del></del>	1 1	<u> </u>	1	1		l	<del>                                     </del>
2,4-Dinitrophenol			45.7	TIDISU	47.4	17	V:152	1155	1-		1	1 1		i	- <del> </del>
4-Nitrophenol		10,233		0,27	4	1	4.248	1700	17		1	1 1	-	<u> </u>	1 1
Dibenzofuran	0.80		1 1	1	1	+	1	14-7 - X	<del>1 -                                   </del>		<del>†</del>	1 1		1	<del></del> -
2,4-Dinitrotoluene	10.20		<u> </u>	_ <del>1</del>	<del>-1</del>	+	<del>                                     </del>	l	1 1		<u> </u>	1 1		1	<del>                                     </del>
z <sub>1</sub> · Danicoloric	10.20	1	<u>1</u>	15.67	KUU	<del>,                                    </del>	ECF	11/	<del></del>		1	<del></del>		٠	- <del></del> -1
Affected samples:	1				25				<del> </del>			<del></del>			!
record semples.	1				EE.Fr.							—— <del> </del>			!
	i.			Erol	+ E4	4	FAI	+5							!
	1			I Envi	JEK US		EOF	E' C	/						

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

Reviewer's Init/Date: 1/27/01

These flags should be applied to the analytes on the sample data sheets.

<sup># =</sup> Minimum Relative Response Factor

# CALIBRATION OUTLIER LOW CONCENTRATION WATER SEMIVOLATILE TCL COMPOUNDS (Page 2 of 2)

Pz 9 of 9

CASE\SAS#: 27986	LABORATORY: PDF MURLY TICAL
COLUMN:	SITE NAME: HIM ED LAN PEJUL

Instrument#H - H15973		Initia	l Cal.			itin. Cal			ntin. Ca		Co	ntin. Ca	.1	Contin. Cal.		
Date/Time:	1	5/2/0	0-10	33	15/14/	00-12	29	5/17/	16-00	46						
	#	rf	%rsd		rf	%d		rf 1	% d	*	rf	<b>%</b> d		гf	<b>%</b> d	*
Diethylphthalate	0.01		Ĺ					L								
4-Chlorophenyl-phenylether	0.40	L				<u> </u>	1	L1					1		L	L
Fluorene	0.90				1	<u> </u>	1			لــــــــــــــــــــــــــــــــــــــ		<u></u>	1	L	<u> </u>	
4-Nitroaniline	0.01				<u>L</u>					لــــــــــــــــــــــــــــــــــــــ		<u> </u>	1		L	
4,6-Dinitro-2-methylphenol	0.01	DILL	<u> </u>		10,163	403	IJ	0145		لــــــــــــــــــــــــــــــــــــــ		<u> </u>	1			
N-nitrosodiphenylamine	0.01		L				<u> </u>							<u></u>		
4-Bromophenyl-phenylether	[0.10]			Щ.			1			1		L			L	<u></u>
exachlorobenzene	0.10		L	1	1	L	1						1		L	L
Pentachlorophenol	0.05	l				L	1									
Phenanthrene	10.70									1 ]			1			
Anthracene	10.70				1	1	1	L					1			
Di-n-butylphthalate	0.01						ı									Ĺ
Fluoranthene	10.60				1		1						1			
Pyrene	10.60				1					<u> </u>			1			
Butylbenzylphthalate	0.01			L	L	I	<u> </u>			1_1			1		L	
3'-Dichlorobenzidine	0.01			L	Ī		L					1	1			匸
inzo(a)anthracene	0.80	 				1	1								L	
Chrysene	0.70				1		1						1			
bis(2-Ethylhexyl)phthalate	0.01	! !	1	1	1	1	1					-			1	
Di-n-octyl phthalate	0.01			Ĺ	1	1	1	I I					1			
Benzo(b)fluoranthene	0.70		!	L	1		Ī			<u> </u>			1		1	!
Benzo(k)fluoranthene	0.70	!	1	1.	1	1	1	1		1_1	1					
Benzo(a)pyrene	0.70	†	[	1	1		1	I I		1 1			1			<u> </u>
Indeno(1,2,3-cd)pyrene	10.50	!		1	1	1	$\overline{1}$			1			1			
Dibenz(a,h)anthrancene	0.40	!	1	1	1	1	1	1		1 1		<u> </u>	1		1	
nzo(g,h,i)perylene	10.50	!		1	l	1	I	II					1			
	Ī	,	1	1	1	!	1					!	1			
Nitrobenzene-d5	0.01	}		1	1	1 _	1	1		Ī., .			1		1	1
2-Fluorobiphenyl	0.70	1		L			Ī	II					Ī			
Terphenyl-d14	10.50	!		1	!	!	1	1			-					<u> </u>
Phenol-d5	10.80		}	}	1	· · · · · · · · · · · · · · · · · · ·	}	1		1		}	1		1	1
2-Fluorophenol	0.60		I	Ī	1	1	Ī	1		Ī		1			Ī	Ī
2,4,6-Tribromophenol	0.01		İ	i	1	ì	ī	1		i		i	Ť		i	<del>-</del>

Reviewer's Init/Date: 6/27/6)

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

These flags should be applied to the analytes on the sample data sheets.

# = Minimum Relative Response Factor

ESAT-5-022.3 1/95

#### ORGANIC DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature used in this document, the following code letters and associated definitions are provided:

**VALUE** - when/if the result of a value is greater than or equal to the Contract Required Quantitation Limit (CRQL).

- U Indicates that the compound was analyzed for, but not detected. The sample quantitation limit corrected for dilution and percent moisture is reported.
- J Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound where the result is less than the sample quantitation limit, but greater than zero. The flag is also used to indicate a reported result having an associated QC problem.
- R Indicates the data are unusable. (NOTE: The analyte may or may not be present.)
- N Indicates presumptive evidence of a compound. This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search.
- P Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns. The lower of the two results is reported.
- C Indicates pesticide results that have been confirmed by GC/MS.
- B Indicates the analyte is detected in the associated blank as well as in the sample.
- E Indicates compounds whose concentrations exceed the calibration range of the instrument.
- D Indicates an identified compound in an analysis has been diluted. This flag alerts the data user to any differences between the concentrations reported in the two analysis.
- A Indicates tentatively identified compounds that are suspected to be aldol condensation products.
- G Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method.
- L Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method.
- T Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample.
- X,Y,Z are reserved for laboratory defined flags.

<b>%E</b> I	PA	Unite		Environr tract Lab			tion Agency am	& Una	in of Cu	offic Reposition Reco	ı d	DG No.	Case No.	· / / ;	}	
1. Matrix (Enter in	مىلىنىنىنىنىنىنىنىنىنىنىنىنىنىنىنىنىنىنى	2	Preser		,., -	3. Reg	gion No Sai			5, Date Shippe	d Carrier	: K	7. Date Receive	dReceiv	ed by:	
Column A)  1. Surface V	Valer				• •	•	er (Name)	C Silvi	,,	Airbill Number	2740554		Laboratory Contr 68 - D7 - c	act No		
<ol> <li>Ground V</li> <li>Leachate</li> <li>Field QC</li> </ol>	Vater 🕝	***	2. HN 3. Nal 4. H2	03 HSO4			er Signature	17 , 11		6. Ship To:	11 1/2 / h x 11 /	ind section	8 Transfer to		Date Received	
5. Soil/Sedir 6. PE-water 7. PE-soil			5. læ 6. CH	only	- 1	4. Pur	pose <sup>**</sup> E SF PRP	PA A	ong Term ction RIFS	168	O Estifis.	nt Corch Sur Kts, TX <sub>1734</sub>	Received by:			
8. Other (spe Column A			In (	Column D Preserve	)::[	$\Box$	ST FED BZ	Ri Ri	RD RA O&M		Cart _ aude		Contract Numbe	F	rice	
CLP Sample Numbers (from labels)	A Matnx (from Box 1)	B Conc	C Sample Type Comp /	vative	T (circle PR* 7	A one)	E RAS Analysi TA (circle one) PR 7 14 2	TA (circle one) PR* 7 14 21	Trackii or Tag	F nal Specific ng Number J Numbers	G Z Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	Sampler Initials	K Sample Condition	
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		,					人		1 -	277	<i>i</i> 3	1 1/2/21	, 4,	<del> </del>		
				1					-/ ¥-	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	111/54	y 100	7.1.4	ļ — ·		
Shipment for Ca Complete? (Y/N		Page	- <u>-</u> B	OA MS/M: NA MS/M:	SD Req	uired? uired?	Y/N Sar Y/N Sar	nple#			Additional Sampler Si		Chain of Custody Seal	Number(s		
PR provides 7-di or preliminary res			nd in add	lition to p			d? Y/N <sup>1</sup> Sar ults. Reque:	ele	Chain of	Custody F	Y			<del></del>		
Relinquished by					e / Tim	ne	Received b	y: (Signalure)	<del></del>		ed by: (Signature)	Date / Time	Received by (	Signature)		
	· 1	100		1 11	. ,	(A)	ļ					1		,		
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Relinquished by		re)		Dat Pink - SMO (	e / Tim	ie	Received fo (Signature)	or Laboratory t	y: Lius	Date / 5-3-co	Time Remark	s: Is custody seal intact?	YN/none Cu.5 i SD C See Reverse for Ac	E	DOFTL	

White - Lab Copy for Return to SMO Yellow - Lab Copy for Return to Region

\*\*See Reverse for Additional Standard Instructions

\*\*See Reverse for Purpose Code Definitions
CLASS 99 002

&EI	PA	<b>\</b>	Con	tract Lab	vironmental Protection Agency 1 Laboratory Program  Organic Traffic Report  & Chain of Custody Record  (For Organic CLP Analysis)										
. Matrix		2	Preser	valiva		gion No. San	npling Co.	5,	, Date Shippe	d Carrier	- <b>K</b>	7. Date Receive	edReceiv	ed by:	
Charles (Charles )				A 5 3	Samp	er (Name)			irbill Number			Laboratory Cont	ract No. It	Init Price	
1. Surface V			1, HG 2. HN		21	. ( )	$C^{-1} \otimes i$	· · · · ·	3182	2940554	ر <sup>٠</sup> .	68-D7-6		525	
. 2. Ground V . 3. Leachale	- <del>2</del>		3. Na	H5U4	Sampl	er Signature	87,000	6.	. Ship To: $\widehat{U}$	DOW Mile	And Service	8. Transfer to:	](	Date Received	
4. Field QC 5. Soll/Sedi 6. PE-water	ment		8. CH	anly 30H	l lea	pose** Ea	irly Action	ong-Term	16-8	O williakin	ed (note Sur	Donning hu	Descived by		
77. PE-soll 73. Other (spe Column A	ecify in \)		i in t	er (specil Column D Preserve		SF PRP ST FED BZ	REM RI SI	RIFS V RD RA O&M		Curi Curch		Contract Numbe	Contract Number		
. CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other	B Conc Low Med	C Sample Type: Comp./ Grab	vative	TA (circle one) PR* 7 (14 21 VOA	E RAS Analysis TA (circle one) PR* 7 14 21	TA (circle one)	Regional Tracking or Tag N	Specific Number	G Z Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	Sampler Initials	K Sample Condition	
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hipment for Ca		Pag			SD Required?	Y/N San				Additional Sampler Si		Chain of Custody Sea	l Number(	s)	
omplete? (Y/N	<b>"</b>   -	of			SD Required?	Y/N San			<del></del>	Vel	raling (	21115	1.11	11,-	
R provides 7-d preliminary re			nd in ad	dition to p				Chain of (	Custody I	Record	······································		- / /		
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elinquished by					te / Time	(Signature)	or Laboratory Coulon	by: Rich	Date /	Time Remark	s: Is custody seal intact?	500	5 : E	7986 OoF/L Standard Instructions	
ribution Blue R White	Lab Copy	Peturn	to SMO	Yellow - Lab	Copy for Return	to Region						**See Reverse for			

EPA Fq 10-2 (2/99)

&EI	P	Unite	d States Cont	Environi Iract Lab	mental Protect oratory Progra	ını 	& 1	in of Cus r Organic C	stody Re	J	, J	110	1	/ ' Y'	· )
1. Matrix (Enter in	<u> </u>	2	Preser (Enter In Column I				npling Co.		5. Date Shippi	ed Carrier	<u> </u>		7. Date Receive	Cri	los Fun
Čolumn A)			Column l	D) ' '	Sample	er (Name)		1	Airbill Number	21./10-00			Laboratory Conf	ract No U	nit Price
1. Surface \			1. HCI	01			1 (1	; 4		21/10556	<u>.</u>		68-07		525 K.J.
<ol> <li>Ground V</li> <li>Leachate</li> <li>Field QC</li> </ol>	•		2. HN0 3. Nat 4. H25	1SO4		er Signature	1 11	Op.	6 Ship To.	Madepart Letter	1 30	2 1 1 1	8. Transfer to:	D	ate Received
5. Soil/Sedi 6. PE-water 7. PE-soll			5. Ice 6. CH	only	Lead	pose E	□ PA A	ong Term clion RIFS	1021	in the mile		1. 1. 101	Received by		
8. Other (spi Column A			in (	Column E Preserve	/ I 🗀	PRP ST FED BZ	REM RI SI ESI	RD RA O&M	ATTN:	and from	1 h 11 2	- 77% <u>対</u>	Contract Number	er P	Price
. CLP Sample Numbers (from labels)	A Matrix (from Box 1)	B Conc Low Med	C Sample Type Comp / Grab	D Preservative (from Box 2)	TA (circle one) PR* 7 14 21	E RAS Analysis TA (circle one) PR* 7 14 21	TA (circle one)	Trackii or Tac	F nal Specific ng Number 3 Numbers	G Station Location Identifier	Mo Yea Sa	H n/Day/ r/Time nmple lection	I Corresponding CLP Inorganic Sample No	J Sampler Initials	K Sample Condition
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PR provides 7-6 or preliminary re	day data t esults will	urnarou increas	ind in add e analytic	dition to p cal costs	preliminary res	sults Reque	sts	Chain o	f Custody	Record					
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Relinquished by	y (Signal	ure)		Da	nte / Time	Received for (Signature	or Laboratory	by:	Date 5-300	/ Time Remark	ks: Is custo	dy seal intact? (	DN/none Cas	e:27	936 0FFL
stribution Blue White	Region Copy - Lab Copy fo	r Return	lo SMO	Pink - SMO Yellow - Lal	Copy b Copy for Return			and the second second				<del></del>	See Reverse for A	Additional S	tandard Instruction

EPA Form 9110-2 (2/99)

\*See Reverse for Purpose Code Definitions

CLASS 99 002 -

SEPA United States Environmental P Contract Laboratory F	rotection Agency & Cha	ganic Traffic Reportain of Custody Record Organic CLP Analysis)	ord	SDG No.	Case No.	4		
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A. Surface Water 1. HCl	ampler (Name)	Airbill Number	24405365	5	Laboratory Contract N 68 - D 7-000	o. Unit Price		
2. Ground Water 2. HNO3 3. Leachate 3. NaHSO4 4. H2SO4	ampler Signature	6. Ship To:	1 Marchipica	1 5211412	8. Transfer to:	Date Received		
5. Soil/Sediment 5. Ica only 6. PE-water 6. CH3OH 7. Other (specify	Purpose** Early Action	ong Term	atel n	1 11/16 Sull 1. TX 2738	Received by:			
8. Other (specify in Column D) N. Not Preserved	Lead  SF PRP REM ST RI FED BZ ESI		con seemed		Contract Number	Price		
CLP Sample Matnx (from Box 1) Other Low Comp / Box 2) Other Med Grab Other Voa	4 21 PR* 7 14 21 PR* 7 14 21	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	Corresponding Sam CLP Inorganic Init Sample No.	J K opler Sample ials Condition		
27 87 2 Lite (401) 5 -		1. altole 1 . 1 . 24 1 8	5 W115A	7 4 700	الرار			
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77.11 - 16 61.25 -	· · ·	Far-3688, 1689	1	5/03/21158	18A 9	f		
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R provides 7-day data turnaround in addition to preliminal preliminary results will increase analytical costs.	ry results. Requests	Chain of Custody	Record					
elinquished by (Signature) Date / Time		·····	ned by: (Signature)	Date / Time	Received by: (Signa	ture)		
1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2	(2)							
Plinquished by: (Signature) Date / Time		Relinquist	ned by: (Signature)	Date / Time	Received by: (Signa	Received by: (Signature)		
Plinquished by: (Signature)  Date / Time	Received for Laboratory (Signature)	by: Date 5-300	/ Time Remarks	: Is custody seal intact? (	N/none Case: 7 SDG; E See Reverse for Addition	EOOFFL		

PA For 10-2 (2/99)

		Hade	nd Clates	Environ	nental Protec	tion Agency		janic Traffi			`⊃G No.	Case No.		. ,
WE	一	± Onite	Con	tract Lab	oratory Progra	am		<b>in of Custo</b> or Organic CLP		d		1 /	1,6	*
1. Matrix		2	. Preser		3. Re	gion No. Sar	mpling Co.	5.	Date Shippe	ed Carrier	(	7. Date Receive	dReceiv	red by:
(Enter in Column A)	*		Column	OI.	Sample	ز (Name)	5 0 1 C		rbill Number	1 21/		Laboratory Cont		Mor Pin
1. Surface	Wales		1, HC		·	1 1116	t	f		474055	73	68-07-	Yane	525 00
2. Ground	Water :	.	2. HN	<b>03</b> :	Samol	er Signature		6.				8. Transfer to:		Date Received
3. Leachald 4. Field QC		i	3. Nal 4. H29	HS04 S04		•	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	,	$\mathcal{P}\mathcal{D}$	P. Marcy new	Ser ices			
5. Soil/Sed	iment		5. ice	only 30H	4 Pur		arly Action	ong Term	167.0	" Largic	DA CHARGOLUIC	Received by:		
7. PE-soil	•		7. Oth	er (specil	y	SF PRP	TIPA A	ction	111.	(Chirthe net	, TX 71380			
(8). Other (sp Colyma				Column D Preserve		ST [	RI SI	⊠RD Ì	ATTN:	ear, June	6,115T	Contract Numbe	r	Price
· CLP	A	В	С	D		E		F Regional		G Station	H Mo/Day/	Corresponding	Campia	K
Sample Numbers	Matrix (from	Conc	Sample Type	Preser- vative	TA	RAS Analysis	S TA	Tracking t	Number	Location	Year/Time	CLP Inorganic	Sample   Initials	r Sample Condition
(from labels)	Box 1)	Ì, -	) "	(from	(circle one) PR* 7 14, 21	(circle one)	(circle one)	or Tag Nu	umbers	ldentifier	Sample Collection	Sample No.		
	Other	Low	Comp./ Grab	Box 2) Other	VOA	BNA	PesV PCB							
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omplete? (Y	N)!  -	of			SD Required? S/MSD Require		nple #: nple #:		•	Ledbert C	Tentral	21421	, 27	122
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preliminary re	sults will	increas		al costs.		·		Chain of C						····
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elinquished by	r: (Signat	ure)		Dat	e / Time	Received b	y: (Signature	)	Relinquish	ed by: (Signature)	Date / Time	Received by: (	Signature	)
						<u> </u>			ļ				·	
elinquished by	r: (Signat	ure)		Dat	e / Time	Received for	or Laboratory	by:	Date /	Time Remarks	s: Is custody seal intact?	N/none Case	: 27	986
				<u> </u>		10.9.101010	Carlor	Tun	5-5.00	9:05	· · · · · · · · · · · · · · · · · · ·	5DG:	EO	OFL

Pink - SMO Copy
White - Lab Copy for Return to SMO
White - Lab Copy for Return to SMO
White - Lab Copy for Return to SMO

See Reverse for Additional Standard Instructions
\*\*See Reverse for Purpose Code Definitions

CLASS-99 002

Q.FI	PΔ	Unit			mental Protectors		& Cha	janic Trafi in of Cus	tody Řeco		SDG No.	C	ase No. エージスコ	,5	
								or Organic CL	P Analysis)						~
Matrix (Enter in	er e		2. Presi Enler Colum		3. Re	gion No San	npling Co.	15 1967 - 196	i. Daţe Shippe	Carrier	<b>X</b>	7.	Date Receive	edReceiv	ed by:
Column A)			Coun	n U		er (Name)		A	urbill Number		3.1		aboratory Cont		Unit Price
1. Surface \		.	1, H 2. H	d		116 E.	11 9		3/6	(1274055	>: /		68-07-0	004	5 25 00
2. Ground V 3. Leachale 4. Field QC		1	3. N	NO3 8HSO4 2SO4		,	000	6	Ship To:	out Thealigh	al Dervice		Transfer to:	]	Date Received
5. Soll/Sedi	ment		5. lo 6. Ci	e only H3OH	4. Pur	pose** Ea		ong-Term			40 inde 510. 14 - 77380		eceived by:		
7. PE-soil 8. Other (sp Column A	ecify in 1)		in	ther (speci Column E of Preserve	<b>3</b> [3] [-	ST	TIREM [	RIFS RD RA O&M		Scan Swill			ontract Numbe	r I	Price
. CLP Sample Numbers from labels)	A Matrix (from Box 1)	B Conc	C Sampl Type Comp Grab	(from ./ Box 2)	TA (circle one) PR* 7 (14/21	E RAS Analysis TA (circle one) PR* 7 14/21	TA (circle one) PR* 7 14 21 PesV	Regiona Tracking	Specific Number	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	CL	I responding P Inorganic ample No.	J Sample Initials	K Sample Condition
F1716	62	LL.	( ( ( )		VOA 大	BNA	PCB	51: 75 87.	-67.6	107716A	0/03/00/1425		N/ N	1	
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16/1/2	·.	1	. 1	1	λ	-	• • •	44	10	12.116 8	1/13/11/1503		NA	1.	
EC   1/7	`	17	Buch.	· £,	)	X		1		willias	25/03/10/1503		N'A	17	
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ipment for Ga implete? (Y)N	ise	Pag of			SD Required? SD Required?	Y/N San Y/N San		<del></del>		Additional Sampler Sig	natures ()		f Custody Sea		
	'   ·		-			d? Y/N/ San				Viction )(	Jeal Marti	21	1231	117	"F
R provides 7-d preliminary re			ind in ac	ddition to p			its	Chain of	Custody I	Record					
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linquished by: (Signature)  Date / Time Received by: (Signature)  Relinquished by			ed by: (Signature)	Date / Time	: F	Received by: (	Signature	)							
linquished by:		·		<u></u>	e / Time	Received fo (Signature)	r Laboratory I	Più	Date /		: Is custody seal intact?		5DG	: E0	OFL
bution Blue R	egion Copy	Datum	I- CHO	Pink - SMO	Copy	. 0						266	neverse for A	uditional S	Standard Instructions

\*\*See Reverse for Purpose Code Definition

Q.FI	D.	Unite	ed States	Environn	nental Protection	ction Agency	& Ć	in of Cu	affic Repo ustody Rec	j	I COG No.	Case No.		
		<b>A</b>	Cont	raci Labi			<u>`</u>	or Organic	CLP Analysis)			1 198		
1. Matrix		2	Preser	rafiya 🐪	3. Re	gion No San	pling Co.	1 - 14 ( c	5. Date Shippe	d Carrier		7. Date Received		ed by:
Enter In Cohenet Al	नित्र स्टब्स् स्टब्स्		Sale of L	1	Samo	ler (Name)			Airbill Number			Laboratory Contra		
1. Surface	1 X 5 2	1	1 110			: (	- Car	i.e.		0 2740155	43	68-D7-0		5 25 500
2. Ground V	Nater 🖑		1. HC 2. HN 3. Nai	<b>)</b> 3	Samp	ler Signature	/	+	6. Ship Tq.			8. Transfer to:		Date Received
3. Leachale		1	3. Nat 4. H25	1804 304		777114 /	· ( / ()-		+ $PD$	of Analytica	A permis		ĺ	
4.5. Soil/Sedi	ment	1	5. Ice (	only			rfy Action		108	O La refor	A Services A Circle South	Received by:		
18. PE-water 品7. PE-soil:;	<b>r</b> 3.	1	6. CH:	XOH) X (apecil		SF JPRP	PA A	ong Term	1):01	durilands	, TX 71380			
10 Alban (an	ecify in		in (	Column D	7 i St	]st [	TRI	RIFS RD RA			, , , , , , , , , , , , , , , , , , , ,	Contract Number	Ī	Price
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. CLP	Α	В	С	D		Ē				•		C	J.	К
Sample	Matnx	Conc	Sample			RAS Analysis	TA	Regio	onal Specific king Number	Station Location	Mo/Day/ Year/Time	Corresponding CLP Inorganic	Sample: Initials	Sample Condition
Numbers (from labels)	(from Box 1)		Type:	vative (from	TA (circle one)	TA (circle one)	(circle one)	or Ta	ag Numbers	Identifier	Sample Collection	Sample No.		Johnanian
,	Other	Low	Comp /	1 004 21 1		PR 7 (4)21	PesV	4			Collection			
	<del>  </del>	Med	(Grab)		VOA	BNA	PCB	ļ	44.2.2					-
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omplete? (Y	(N)	of	<u> </u>		SD Required?					Y 0 0 (	- 0	21721	,	· *
						ed? Y/N / San		<del></del>		(celency)	-lowred		7 / 5	<u> </u>
R provides 7-c preliminary re					reliminary re	sults. Reques	is	Chain o	of Custody I	Record				
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elinguished by	ı: (Sinnat	urel		Dal	e / Time	Received b	v: (Signature		Relinauish	ed by: (Signature)	Date / Time	Received by: (S	Sinnature	1
aniquisined by	i. (Siyilal	<i>(</i>			1		, , , o.g., a.u.,	-/	1,000,400,000	se sy. (signature)	1	Treceived by (3	ngriaiui <b>c</b>	<i>,</i>
	/0:===1	ural.		Dal	e / Time	Received to	r Laboratory	by:	Date	Time Remarks	s: Is custody seal intact?(Y)	Ninona Ca C		700
inquished by	r: (Signat	ure)		Ual	e i une I	(Signature)					s. is custouy seal milact.			7986
				) - L C140		_L	aur	Puis	17 5 00	1.001		Saa Payarsa for Ad	); <u>C</u>	OOPL

mbution Blue - Region Copy
White - Lab Copy for Return to SMO
Pink - SMO Copy
Yellow - Lab Copy for Return to Region

See Reverse for Additional Standard Instructions

•	, ~ <b>5</b>	ن			mental Protectoratory Progr		& Cha	in of Cu	iffic Report stody Reco CLP Analysis)		SDG No.		Case No.	186	
(But b 2	i de la como	2	Prese		3 Re	gion No. San	npling Co.		5. Date Shippe	ed Carner	I		7. Date Receive 5-5-00	dReceive	ed by: for Prin
richamp A)	4000			、发生		ler (Name)			Airbill Number				Laboratory Contr	act No. IL	Init Price
4. Surface V	Valor ii		1. HC 2. HN 3. Na	03		(1) 1 c. E ler Signature	· Cari	11	3/8/3	1140552	<u>/</u>		68-D7-0	2004	575 × 500
3. Leaching	valey C		3. Na	HSQ4 ::	Samp	ler Signature	/ K. C. C.	4	6. Ship lo:	P Hixlytic	al Service	S.	8. Transfer to:		ate Received
1.4. Field CO 15. Soil/Sedir 10. PE-water 17. PE-soil	ment		5. ice 6. CH	SO4 bnly 3OHs	9. 4 Pu	rpose** E	arly Action	ong-Term	11:0	Lakefin	H Circle		Received by:		
CB. Other (and Column A	ocity in		. h	er (specil Column D Preserve	X 1.464 [	SF PRP ST FED	TI Wash	RIFS RD RA O&M	1710	Woodlan		380	Contract Number	r F	Price
<u> </u>	_ 1	В	С	D	n L	]8Z [ E	[E31		•	Can Sund				J	Ικ
. CLP Sample Numbers (from labels)	A Matrix (from Box 1)	Conc.	Sample Type: Comp./	Preser- vative	TA (circle one) PR* 7 (14 21	TA (circle one) PR* 7 (14 21	TA (syrcia cos)	Trackir or Tag	nal Specific ng Number ng Numbers	Station Location Identifier	Mo/Day/ Year/Time Sample Collection		Corresponding CLP Inorganic Sample No.	Sampler Initials	Sample Condition
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complete?	ise I) _	Page of		NA MS/M	SD Required? SD Required? IS/MSD Require	Y/N San YN San ed? YN San	nple #:			Additional Sampler 9	gnatures The res	j	in of Custody Seaf	,	•
R provides 7-d r preliminary re			nd in ad	dition to p	reliminary re			Chain o	f Custody I	Record		•			
elinquished by	: (Signatu	rę)	····ir···	1.057	te / Time	t .	y: (Signature	?)	Relinquish	ed by: (Signature)	Date /	Time	Received by: (	Signature)	
elinquished by:	(Signatu	re)		Da	te / Time	Received b	y: (Signature	<del>)</del>	Relinquish	ed by: (Signature)	Date /	Time	Received by: (	Signature)	
elinquished by:	(Signatu	re)		Dai	le / Time	Received to (Signature)	or Laboratory Couler	by: Fin	Date /	1	ks: Is custody seal in	acl (M)	V/none Cus.	e;27 : E o	
tribution Blue - R White - I	egion Copy Lab Copy	Return t	o SMO	Pink - SMO Yellow - Lab	Copy Copy for Return		4							dditional S	tandard Instructions

EPA Fc 310-2 (2/99)

## 2LCA LOW CONC. WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: E00FL

		<del></del>		<del>,          </del> ,
	EPA	BFB	OTHER	TOT
	SAMPLE NO.	%REC #		OUT
		!=====	=====	!===!
	VBLK65	89		0 !
	VLCS65	90		0
03	EOOFF	88		0
04	EOOFL	91		0
05		91		0
06	VBLK66	90		0
07		80		0
08	EOOFH	91		0
09		91		0
10	EOOFK	92		0
11	E00F4	91		0
12		94		0
13		96		0
14	E00F5	99		0
15		95		0
16		100		0
17	ECFN3	94		0;
18	ECFN4	91		0;
19	ECFN5	106		0;
20	ECFN6	97		0
21		98		0;
22		94		0
23		92		0;
24	ECFN9	94		0
25	E01TP	96		0;
	E01TQ	92		0;
27		86		0
	VHBLK01	94		0
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QC LIMITS %REC
BFB = Bromofluorobenzene (80-120)

Pages 1 0 1

<sup>#</sup> Column to be used to flag recovery values

<sup>\*</sup> Values outside of contract required QC limits

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE LAB CONTROL SAMPLE RECOVERY

VLCS65

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: FVLCS069

LCS Lot No.: 60

Lab File ID: F1143

Date Analyzed: 05/05/00

Purge Volume: 20.0 (mL)

Dilution Factor: 1.0

LCS Aliquot: 10.0 (uL)

COMPOUND	AMOUNT ADDED (ng)	AMOUNT RECOVERED (ng)	%REC #	QC LIMITS
Vinyl chloride	100	90	90	60-140
1,2-Dichloroethane	100	133	133	60-140
Carbon tetrachloride	100	125	125	60-140
1,2-Dichloropropane	100	125	125	60-140
Trichloroethene	¦ 100	121	121	60-140
1,1,2-Trichloroethane	100	125	125	60-140
Benzene	100	122	122	60-140
cis-1,3-Dichloropropene	100	116	116	60-140
Bromoform	100	138	138	60-140
Tetrachloroethene	100	118	118	60-140
1,2-Dibromoethane	100	111	111	60-140
1,4-Dichlorobenzene	100	120	120	60-140
1	i	l 		! !

COMMENTS:					

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

<sup>\*</sup> Values outside of QC limits.

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE LAB CONTROL SAMPLE RECOVERY

VLCS66

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: FVLCS070

LCS Lot No.: 60

Lab File ID: F1165

Date Analyzed: 05/08/00

Purge Volume: 20.0 (mL)

Dilution Factor: 1.0

LCS Aliquot: 10.0 (uL)

COMPOUND	AMOUNT ADDED (ng)	AMOUNT RECOVERED (ng)	%REC #	QC LIMITS
Vinyl chloride	100	! 89	! ===== ! 89	60-140
1,2-Dichloroethane	100	131	131	60-140
Carbon tetrachloride	100	121	121	60-140
1,2-Dichloropropane	100	122	122	60-140
Trichloroethene	100	125	125	60-140
1,1,2-Trichloroethane	100	115	119	60-140
Benzene	100	126	126	60-140
cis-1,3-Dichloropropene	100	130	130	60-140
Bromoform	100	136	136	60-140
Tetrachloroethene	100	115	115	60-140
1,2-Dibromoethane	100	106	106	60-140
1,4-Dichlorobenzene	100	124	124	60-140
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COMMENTS:	

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

<sup>\*</sup> Values outside of QC limits.

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE LAB CONTROL SAMPLE RECOVERY

VLCS02

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: EVLCS02

LCS Lot No.: 60

Lab File ID: E0866

Date Analyzed: 05/11/00

Purge Volume: 20.0 (mL)

Dilution Factor: 1.0

LCS Aliquot: 10.0 (uL)

COMPOUND	AMOUNT ADDED (ng)	AMOUNT RECOVERED (ng)	%REC #	QC LIMITS
Vinyl chloride	100	94	94	60-140
1,2-Dichloroethane	100	105	105	60-140
Carbon tetrachloride	100	98	98	60-140
1,2-Dichloropropane	100	103	103	60-140
Trichloroethene	100	102	102	60-140
1,1,2-Trichloroethane	100	104	104	60-140
Benzene	100	102	102	60-140
cis-1,3-Dichloropropene	100	97	97	60-140
Bromoform	100	105	105	60-140
Tetrachloroethene	100	98	98	60-140
1,2-Dibromoethane	100	¦ 103	103	60-140
1,4-Dichlorobenzene	100	97	97	60-140
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COMMENTS:		

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

<sup>\*</sup> Values outside of QC limits.

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE LAB CONTROL SAMPLE RECOVERY

VLCS03

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: EVLCS03

LCS Lot No.: 60

Lab File ID: E0883

Date Analyzed: 05/12/00

Purge Volume: 20.0 (mL)

Dilution Factor: 1.0

LCS Aliquot: 10.0 (uL)

COMPOUND	AMOUNT ADDED (ng)	AMOUNT RECOVERED (ng)	%REC #	QC LIMITS
	=======	;=====================================	70	=====
Vinyl chloride	100	79	79	60-140
1,2-Dichloroethane	100	104	104	60-140
Carbon tetrachloride	100	108	108	60-140
1,2-Dichloropropane	100	106	106	60-140
Trichloroethene	100	103	103	60-140
1,1,2-Trichloroethane	100	105	105	60-140
Benzene	100	107	107	60-140
cis-1,3-Dichloropropene	100	99	99	60-140
Bromoform	100	103	103	60-140
Tetrachloroethene	100	103	103	60-140
1,2-Dibromoethane	100	101	101	60-140
1,4-Dichlorobenzene	100	100	100	60-140
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COMMENTS:	

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

<sup>\*</sup> Values outside of QC limits.

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE METHOD BLANK SUMMARY

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

VBLK65

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: FVBLK069

Date Analyzed: 05/05/00

Lab File ID: F1142

Time Analyzed: 1702

Instrument ID: F-HP5973

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
02 03	EOOFL	FVLCS069 6050.003 6050.002	F1143 F1144 F1145	1750 1839 1928
04 05 06 07	E00FG	6050.004	F1146	2016
08 09 10 11				
12 13 14				
15 16 17 18				
19 20 21 22				
23 24 25 26				
27 28 29 30				

COMMENTS:	

LOW CONC. WATER VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

VBLK66

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: FVBLK070

Date Analyzed: 05/08/00

Time Analyzed: 1339

Lab File ID: F1164

Instrument ID: F-HP5973

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
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01	VLCS66	FVLCS070	F1165	1433
02	EOOFH	6050.005	F1166	1520
03	EOOFJ	6050.006	F1167	1608
04		6050.007	F1168	1656
05		6050.008	F1169	1744
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COMMENTS:	

EPA SAMPLE NO.

FOM CONC. MATER VOLATILE METHOD BLANK SUMMARY

ntiact: 68-D7-0004

Lab Name: PDP ANALYTICAL SERVICES Continact: 68-D7-0004

Instrument ID: E-HP5972

Lab Code: PDP Case No.: 27986 SAS No.: E00FL

Lab Sample ID: EVBLK02

Lab File ID: E0865 Time Analyzed: 1105

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

THIS WETHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

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7597	E0872	500.9909	ECENS	ÞΟ
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EPA SAMPLE NO.

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LOW	CONC.	WATER	VOLATILE	METHOD	BLANK	SUMMARY

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

VBLK03

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: E00FL

Lab Sample ID: EVBLK03

Date Analyzed: 05/11/00

Lab File ID: E0881

Time Analyzed: 2333

Instrument ID: E-HP5972

#### THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
	VLCS03	EVLCS03	E0883	0113
02	ECFN8	6066.008	E0885	0252
03	ECFN9	6066.009	E0886	0341
04		6066.010	E0887	0431
05		6066.011 6066.012	E0888	0520
06 07		ę ·	E0889	0610
08	VHBLK01	6050.001	E0890	0659
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COMMENTS:	

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

VBLK65

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: FVBLK069

Date Received:

Lab File ID: F1142

Date Analyzed: 05/05/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60

CONCENTRATION CAS NO. COMPOUND (uq/L)0 74-87-3-----Chloromethane 1 U 74-83-9-----Bromomethane 1 U 1 U 75-01-4-----Vinyl chloride 1 U 75-00-3-----Chloroethane 75-09-2-----Methylene chloride 2 U 67-64-1-----Acetone 5 | U 75-15-0-----Carbon disulfide 1 U | 75-35-4-----1,1-Dichloroethene 1 U 75-34-3----1,1-Dichloroethane 1 U 1 | U 156-59-2----cis-1,2-Dichloroethene ון נו 156-60-5-----trans-1,2-Dichloroethene 1 | U 67-66-3-----Chloroform 1 | U 107-06-2-----1,2-Dichloroethane 5 U 78-93-3-----2-Butanone 74-97-5-----Bromochloromethane 1 | U 71-55-6----1,1,1-Trichloroethane\_\_\_ 1 | U 56-23-5-----Carbon tetrachloride\_\_\_\_\_ 1 1 U 75-27-4-----Bromodichloromethane\_\_\_\_ 1 U 78-87-5-----1,2-Dichloropropane 1 U | 10061-01-5----cis-1,3-Dichloropropene\_\_\_ 1 | U 79-01-6-----Trichloroethene 1 U 1 U 124-48-1-----Dibromochloromethane 1 | U 79-00-5----1,1,2-Trichloroethane 71-43-2-----Benzene 1 U 10061-02-6----trans-1,3-Dichloropropene 1 U 75-25-2-----Bromoform\_ 1 U 108-10-1-----4-Methyl-2-pentanone 5 U 591-78-6----2-Hexanone\_\_\_\_ 5 U 127-18-4----Tetrachloroethene 1 | U 1 U | 79-34-5-----1,1,2,2-Tetrachloroethane 106-93-4-----1,2-Dibromoethane 1 U 108-88-3-----Toluene 1 | U 108-90-7-----Chlorobenzene 1 U 100-41-4----Ethylbenzene 1 U 1 | U | 100-42-5-----Styrene 1330-20-7-----Xylenes (total) 1 U 541-73-1-----1,3-Dichlorobenzene 1 U 106-46-7-----1,4-Dichlorobenzene 1 U 95-50-1-----1,2-Dichlorobenzene 1 U 1 U | 120-82-1-----1,2,4-Trichlorobenzene\_\_\_ 1 U

#### 1LCE

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

VBLK65

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: E00FL

Lab Sample ID: FVBLK069

Date Received:

Lab File ID: F1142

Date Analyzed: 05/05/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

Number TICs found: 0

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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK66

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: FVBLK070 Date Received: \_\_\_\_\_

Lab File ID: F1164 Date Analyzed: 05/08/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
	Chloroethane	1	U
75-09-2	Methylene chloride	2	U
67-64-1			U
75-15-0	Carbon disulfide		U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	ן ט ן
67-66-3	Chloroform		ן ט
107-06-2	1,2-Dichloroethane	1	U
	2-Butanone	·   5	U
	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane		U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	- 1	U
78-87-5	1,2-Dichloropropane		Ū
10061-01-5	cis-1,3-Dichloropropene		Ū
79-01-6	Trichloroethene		Ū
	Dibromochloromethane		Ū
79-00-5	1,1,2-Trichloroethane	· ·	Ū
71-43-2			Ū
	trans-1,3-Dichloropropene		บ
	Bromoform		Ū
108-10-1	4-Methyl-2-pentanone		บ
	2-Hexanone		Ū
127-18-4	Tetrachloroethene		Ū
79-34-5	1,1,2,2-Tetrachloroethane		Ū
106-93-4	1,2-Dibromoethane		บ
108-88-3	Toluene	ī	Ū
	Chlorobenzene		ָ <u>.</u>
100-41-4	Ethylbenzene		Ū
100-42-5	Styrene	- ·	Ū
1330-20-7	Xylenes (total)	• I	Ū
	1,3-Dichlorobenzene		Ū
	1,4-Dichlorobenzene	- 1	Ū
	1,2-Dichlorobenzene	<b>-</b> .	Ū
	1, 2-Dibromo-3-chloropropane		Ŭ
	1,2,4-Trichlorobenzene		Ū
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

ES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: FVBLK070

Date Received: \_\_\_\_

Lab File ID: F1164

Date Analyzed: 05/08/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK02

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: E00FL

Date Received: \_\_\_\_\_ Lab Sample ID: EVBLK02

Lab File ID: E0865 Date Analyzed: 05/11/00

Dilution Factor: 1.0 Purge Volume: 20 (mL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
		<del></del>	<del></del> !
	Chloromethane	1	U
	Bromomethane	1	U
75-01-4	Vinyl chloride	1	ן טן
75-00-3	Chloroethane	1	U
75-09-2	Methylene chloride	1 2	U !
67-64-1		5	U !
	Carbon disulfide		U
75-35-4	1,1-Dichloroethene	1	U
	1,1-Dichloroethane		U
	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
78-93-3	2-Butanone	5	U !
174-97-5	Bromochloromethane	1	U !
71-55-6	1,1,1-Trichloroethane	1	U !
	Carbon tetrachloride		U !
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane		U
10061-01-5	cis-1,3-Dichloropropene	1	U
	Trichloroethene		U
	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	i 1	U
71-43-2	Benzene	•	ט ו
	trans-1,3-Dichloropropene	1	U
75-25-2		• [	U
	4-Methyl-2-pentanone		U
591-78-6	2-Hexanone		Ū
127-18-4	Tetrachloroethene	`  1	Ū
79-34-5	1,1,2,2-Tetrachloroethane	1	Ū
106-93-4	1,2-Dibromoethane		Ū
108-88-3	Toluene		Ū
108-90-7	Chlorobenzene		Ū
100-41-4	Ethylbenzene	1	Ü
100-42-5	Styrene		Ū
1330-20-7	Styrene Xylenes (total)	• 1	U
541-73-1	1,3-Dichlorobenzene		Ŭ
	1,4-Dichlorobenzene		U
	1,2-Dichlorobenzene	•	U
	1,2-Dibromo-3-chloropropane		U
	1,2,4-Trichlorobenzene	•	ט
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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

> VBLK02 Contract: 68-D7-0004

Lab Na	me:	PDP	ANALYTICAL	SERVICES
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Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: EVBLK02

Date Received: \_\_\_\_

Lab File ID: E0865

Date Analyzed: 05/11/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK03

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: EVBLK03 Date Received: \_\_\_\_\_

Lab File ID: E0881 Date Analyzed: 05/11/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74-87.3	Chloromethane	1	ָ ט
	Bromomethane		Ü
	Vinyl chloride		U
	Chloroethane	<b>-</b> '	U
	Methylene chloride	<b>=</b> '	บ
67-64-1	Acetone		บ
	Carbon disulfide	- :	บ
75-35-4	1,1-Dichloroethene	<del>-</del> :	Ū
75-34-3	1,1-Dichloroethane	<b>-</b> :	บ
	cis-1,2-Dichloroethene	<b>-</b> :	บ
	trans-1,2-Dichloroethene	:	U
! 67-66-3	Chloroform	<del>-</del> :	U
	1,2-Dichloroethane	<b></b> :	U
	2-Butanone	<del>-</del> :	U
	Bromochloromethane	<b>-</b> :	U
	1,1,1-Trichloroethane	<b>-</b> :	U
	Carbon tetrachloride	<b>-</b>	U
	Bromodichloromethane	—·:	เบ
	1,2-Dichloropropane	_ •	เบ
1 10061-01-5-	cis-1,3-Dichloropropene		U
1 70 01 6	Trichloroethene		ָ ֖֖֓
	Dibromochloromethane	<b>-</b> :	U
	1,1,2-Trichloroethane		า ไบ
71-43-2		<b>=</b> :	ไบ
	trans-1,3-Dichloropropene	<b>-</b> :	ี่ ป
	trans-1,3-bichioropropene Bromoform	<b>-</b> '	ប
	Bromoform 4-Methyl-2-pentanone	<b>-</b> :	ָ ֖֓ ֓֞
1 100-10-1	2-Hexanone	<del></del>	្រ  ប
	Tetrachloroethene	<del></del> ,	U
12/-10-4 ! 70-31-5	1,1,2,2-Tetrachloroethane	<b>-</b> :	U
1 106 02 4	1,2,2-letrachioroethane	<b>-</b> ;	ប
108-88-3		<del>-</del> ;	֡֜֝֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֡֓֡֓֡֓֓֡֓֡֓֡֡֡֡
	Chlorobenzene	<b>-</b> :	ָ   
1 100-90-/	Chiolopenzene	<del>-</del> :	U
1 100-41-4	Ethylbenzene	<b>—</b> :	•
100-42-5			U
1 1330-20-7	Xylenes (total) 1,3-Dichlorobenzene		U U
		<del></del> .	
1 105-45-/	1,4-Dichlorobenzene	:	U
	1,2-Dichlorobenzene	<del>-</del> .	U
	1,2-Dibromo-3-chloropropane		U
1 120-82-1	1,2,4-Trichlorobenzene	-¦ 1	U
i		_ i	i

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

VBLK03

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: EVBLK03

Date Received: \_\_\_\_

Lab File ID: E0881

Date Analyzed: 05/11/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1				
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4.		<del></del>		i —— i
5. 6.				ļ ļ
7.				
9.				
10.		1		ļ ļ
12		 		i i
13				<u> </u>
15.				
17.				
19.		i		ļ
20				
22.				
23 .   24 .				
25.		i <del></del>   		
27.				
29.				
30.				
i i		i		il

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

VHBLK01

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Date Received: 05/03/00 Lab Sample ID: 6050.001

Date Analyzed: 05/12/00 Lab File ID: E0890

Dilution Factor: 1.0 Purge Volume: 20 (mL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	Ū
	Bromomethane	•	U
	Vinyl chloride	1	ט ו
	Chloroethane	1	U
	Methylene chloride	· :	Ū
67-64-1		5	U
	Carbon disulfide	1	U
	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
	trans-1,2-Dichloroethene	1	U
	Chloroform	1	U
	1,2-Dichloroethane	1	U
	2-Butanone	5	U
	Bromochloromethane	1	U
	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride		U
	Bromodichloromethane	1	U
	1,2-Dichloropropane	1	Ū
	cis-1,3-Dichloropropene	1	บ
	Trichloroethene		U
124-48-1	Dibromochloromethane	1	U
	1,1,2-Trichloroethane		U
71-43-2		1	U
	trans-1,3-Dichloropropene	1	U
	Bromoform	1	Ū
	4-Methyl-2-pentanone	5	U
	2-Hexanone		U
	Tetrachloroethene	1	Ū
	1,1,2,2-Tetrachloroethane	1	Ū
106-93-4	1,2-Dibromoethane	1	U
108-88-3		1	U
108-90-7	Chlorobenzene	1	U
	Ethylbenzene	1	U
100-42-5	Styrene	1	U
I I	Xylenes (total)		Ū
	1,3-Dichlorobenzene		ប
	1,4-Dichlorobenzene		Ū
	1, 2-Dichlorobenzene		Ū
	1,2-Dibromo-3-chloropropane	1	บ
	1,2,4-Trichlorobenzene	•	Ū
	, , , = ===============================	<u> </u>	i

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

VHBLK01

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.001

Date Received: 05/03/00

Lab File ID: E0890

Date Analyzed: 05/12/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1				, ———— !
2.				
3.				
4				
5		.		<u> </u>
6		.		
7				i
8		· [		i
9.		·		
10.		.		!
11.		- }		<u> </u>
,, <del></del>		·		!
14.		-		<u> </u>
		·		<u> </u>
1.6		·		¦
17		·		l
18.		· [	<del></del>	
19.		· [		i ———
20.		· i		Ì
21.		i ———		i ———
22		·		i
23.		· i		<del></del>
24.		·		
25.				
26.				}
2/i				
28				
29.				
30.				
i -		1	l	

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

E00F4

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6050.008

Date Received: 05/03/00

Lab File ID: F1169

Date Analyzed: 05/08/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
75-00-3	Chloroethane	0.6	J
75-09-2	Methylene chloride	1 2	U
67-64-1		5	U
75-15-0	Carbon disulfide		U
	1,1-Dichloroethene		U
75-34-3	1,1-Dichloroethane	0.9	J
	cis-1,2-Dichloroethene	1	
156-60-5	trans-1,2-Dichloroethene	1	บ
	Chloroform		ប
107-06-2	1,2-Dichloroethane	1	บ
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	1	ប
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride		U
	Bromodichloromethane		Ū
	1,2-Dichloropropane	- :	บี
	cis-1,3-Dichloropropene		บิ
79-01-6	Trichloroethene	0.6	•
124-48-1	Dibromochloromethane		Ū
79-00-5	1,1,2-Trichloroethane		บ
71-43-2			บ
	trans-1,3-Dichloropropene	: = :	U
	Bromoform		บ
	4-Methyl-2-pentanone		บ
591-78-6	2-Hexanone		Ŭ
	Tetrachloroethene		U
79-34-5	1,1,2,2-Tetrachloroethane_		บ
	1,2-Dibromoethane	:	บ
	Toluene	<u> </u>	บ
	Chlorobenzene		Ū
100-41-4	Ethylbenzene		ָ ט
100-41-4		i :	บ
	Xylenes (total)		Ü
	1,3-Dichlorobenzene		
	1,4-Dichlorobenzene		U
			U
	1,2-Dichlorobenzene		U
	1,2-Dibromo-3-chloropropane_	_	U
170-87-1	1,2,4-Trichlorobenzene	1	U

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

E00F4

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.008

Date Received: 05/03/00

Lab File ID: F1169

Date Analyzed: 05/08/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000075-43-4 2.000060-29-7 3. 4.	Methane, dichlorofluoro- Ethyl ether	5.91	40	JN JN ———
6. 7. 8. 9.				
11. 12. 13. 14. 15.				
17 18 19 20 21.				
22. 23. 24. 25.				
27. 28. 29. 30.				

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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

E00F5

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.001 Date Received: 05/05/00

Lab File ID: E0870 Date Analyzed: 05/11/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	1	U
	Bromomethane		บ
	Vinyl chloride		Ū
	Chloroethane	- :	Ū
	Methylene chloride		Ū
67-64-1		. [	U
75-15-0	Carbon disulfide	1	U
75-35-4	1,1-Dichloroethene	. :	U
	1,1-Dichloroethane		U
156-59-2	cis-1,2-Dichloroethene	1	
	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
	2-Butanone	5	U
174-97-5	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
	Trichloroethene	1	U
	Dibromochloromethane	1	U
¦ 79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	1	U
	trans-1,3-Dichloropropene	1	U
75-25-2		[	U
108-10-1	4-Methyl-2-pentanone	5	U
	2-Hexanone	5	U
	Tetrachloroethene	1	U
79-34-5	1,1,2,2-Tetrachloroethane_	[ ]	U
	1,2-Dibromoethane	[	U
108-88-3		1	U
108-90-7	Chlorobenzene	[]	U
100-41-4	Ethylbenzene	1	U
100-42-5	Styrene	1	U
	Xylenes (total)	1	U
	1,3-Dichlorobenzene	] 1	U
	1,4-Dichlorobenzene		U
	1,2-Dichlorobenzene	1	U
	1,2-Dibromo-3-chloropropane_	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
1		1	

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

E00F5

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.001

Date Received: 05/05/00

Lab File ID: E0870

Date Analyzed: 05/11/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
	====================================	=======		=====   
2.				ii
3				
4		İ		İ
6.				
7.		ļ <del></del>		ii
8.				
9.		i		
11.		<u> </u>		
11.				<u>  </u>
13				
14.				
15. 16.		<u> </u>		ļ ļ
17.				
18		!		i i
19				
20.		İ		
22.				
23.		i ——— i		ii
24.				
25. 26.				
127		<u> </u>		
28.				
29.		!		i
30.				
		i		ii

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

E00F6

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.002

Date Received: 05/05/00

Lab File ID: E0871

Date Analyzed: 05/11/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74 07 3	Chloromethane	1 1	U
	Bromomethane		U
	Vinyl chloride		U
	Chloroethane		U
		2	-
	Methylene chloride	•	U
	Carbon disulfide		บ
	1,1-Dichloroethene		្រ  ប
	1,1-Dichloroethane		U
1 156 50 2	cis-1,2-Dichloroethene	_ <u>_</u>	ט
1 156-59-2	trans-1,2-Dichloroethene	1	U
	Chloroform	1	U
	1,2-Dichloroethane	- I	บ
	2-Butanone		Ü
	Bromochloromethane		ָ ֖֖֓֞֝֝֡֓
	1,1,1-Trichloroethane		U
	Carbon tetrachloride	- E	1
1 56-23-5	Carbon tetrachioride		U
1 75-27-4	Bromodichloromethane	i 1	U
	1,2-Dichloropropane		U
1 10061-01-5-	cis-1,3-Dichloropropene		U
	Trichloroethene		U
1 124-48-1	Dibromochloromethane		U
	1,1,2-Trichloroethane	<u>.</u>	U
	Benzene		U
	trans-1,3-Dichloropropene		U
1 /5-25-2	Bromoform 4-Methyl-2-pentanone	_	U
108-10-1	4-metny1-2-pentanone	1	U
	2-Hexanone		U
	Tetrachloroethene		U
1 /9-34-5	1,1,2,2-Tetrachloroethane		U
106-93-4	1,2-Dibromoethane		U
108-88-3	Toluene		U
108-90-7	Chlorobenzene	. 1	U
100-41-4	Ethylbenzene		U
	Styrene		ָט
1330-20-7	Xylenes (total)		U
	1,3-Dichlorobenzene		U
	1,4-Dichlorobenzene		U
	1,2-Dichlorobenzene	_	U
	1,2-Dibromo-3-chloropropane_	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
i		i	1

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

E00F6

Lab Name: PDP ANALYTICAL SERVIC	Lab	Name:	PDP	ANALYTICAL	SERVIC	ES
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Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.002

Date Received: 05/05/00

Lab File ID: E0871

Date Analyzed: 05/11/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1				
3.		İ		i
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10.  11.		ļ		i
12.				ļ
13.				!
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23				
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27.				
28				İ
30.				

EPA SAMPLE NO.

EOOFF

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.003

Date Received: 05/03/00

Lab File ID: F1144

Date Analyzed: 05/05/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1.	บ
	Bromomethane	•	Ū
	Vinyl chloride	•	U
	Chloroethane	•	U
	Methylene chloride	2	U
67-64-1		5	
	Carbon disulfide	1	U
	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
	cis-1,2-Dichloroethene	0.5	J
	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
	1,2-Dichloroethane	1	U
78-93-3	2-Butanone	5	U
74-97-5	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane		U
10061-01-5	cis-1,3-Dichloropropene	1	U
	Trichloroethene	0.6	J
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane		U
71-43-2		1	
10061-02-6	trans-1,3-Dichloropropene	1	Ū
75-25-2	Bromoform	1	U
108-10-1	4-Methyl-2-pentanone	5	U
<b> </b> 591-78-6	2-Hexanone	5	U
127-18-4	Tetrachloroethene	0.8	J
79-34-5	1,1,2,2-Tetrachloroethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-88-3	Toluene	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
100-42-5		1	U
1330-20-7	Xylenes (total)	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	•	U
	1,2-Dichlorobenzene	1	U
	1,2-Dibromo-3-chloropropane		Ū
	1,2,4-Trichlorobenzene		Ū
!			

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EOOFF

Lab Name: PDP ANALYTICAL SERVICE	Lab	Name:	PDP	ANALYTICAL	SERVICE.
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Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.003

Date Received: 05/03/00

Lab File ID: F1144

Date Analyzed: 05/05/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1		= j======= 	=======================================	==== 
j. ————————————————————————————————————		-	<del></del>	<del></del>
2.		-		
4		-		
5.		_		<del></del>
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7.		- ii		
8		- ii	<del></del>	
9		- !		
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.1.				<del></del>
.2.		-	<del> </del>	
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1		_		
2.				
3			<del></del>	
4				
5		_	-	
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8.		_		
9		_		
0		!		



EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

E00FG

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Purge Volume: 20 (mL)

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Date Received: 05/03/00 Lab Sample ID: 6050.004

Date Analyzed: 05/05/00

Dilution Factor: 1.0

Lab File ID: F1146

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	1	U
	Bromomethane	• .	บ
	Vinyl chloride	<u> </u>	บ
	Chloroethane	• :	บ
	Methylene chloride		บ
67-64-1			ับ ไบ
	Carbon disulfide	• :	U
	1,1-Dichloroethene		Ū
	1,1-Dichloroethane	- !	Ū
	cis-1,2-Dichloroethene	- :	U
	trans-1,2-Dichloroethene	- :	U
	Chloroform	_ •	U
	1,2-Dichloroethane	<b>-</b> }	U
	2-Butanone	<u>- :</u>	U
	Bromochloromethane	• I	Ū
	1,1,1-Trichloroethane	- ;	U
	Carbon tetrachloride		U
	Bromodichloromethane	- :	U
	1,2-Dichloropropane	- ;	U
	cis-1,3-Dichloropropene	• :	U
	Trichloroethene	- ·	U
		- :	
	Dibromochloromethane	- :	U
	1,1,2-Trichloroethane	- ;	U
71-43-2		<b>-</b> :	U
	trans-1,3-Dichloropropene	- :	U
	Bromoform	- :	U
	4-Methyl-2-pentanone	• :	U
	2-Hexanone	= <u>}</u>	U
	Tetrachloroethene	- :	U
	1,1,2,2-Tetrachloroethane	- :	U
	1,2-Dibromoethane	- :	U
108-88-3		• :	Ū
	Chlorobenzene	<del>-</del> !	U
	Ethylbenzene		U
100-42-5	•	- :	U
	Xylenes (total)	- :	U
	1,3-Dichlorobenzene	<b>-</b> ;	U
	1,4-Dichlorobenzene	- :	U
	1,2-Dichlorobenzene		U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
	1,2,4-Trichlorobenzene	<del>-</del> !	! -

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.004

Date Received: 05/03/00

Lab File ID: F1146

Date Analyzed: 05/05/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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4.				<del></del> -
6.				¦
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9.				
10.				ļ
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EOOFH

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Date Received: 05/03/00 Lab Sample ID: 6050.005

Date Analyzed: 05/08/00 Lab File ID: F1166

Purge Volume: 20 (mL) Dilution Factor: 1.0

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
			1
	Chloromethane	<b>-</b> :	U
	Bromomethane	<b>-</b> :	U
	Vinyl chloride	- :	U
	Chloroethane	<del>-</del> :	U
75-09-2	Methylene chloride	<del>-</del>	U
67-64-1			U
	Carbon disulfide	_ `	ប
	1,1-Dichloroethene	<b>-</b> ;	U
	1,1-Dichloroethane		U
156-59-2	cis-1,2-Dichloroethene	_	U
156-60-5	trans-1,2-Dichloroethene_		U
	Chloroform	_ `	U
	1,2-Dichloroethane		U
	2-Butanone	<b>-</b> :	U
	Bromochloromethane		U
71-55-6	1,1,1-Trichloroethane		ប
	Carbon tetrachloride		U
75-27-4 <b></b>	Bromodichloromethane		U
i 78-87-5	1,2-Dichloropropane		U
10061-01-5	cis-1,3-Dichloropropene		U
	Trichloroethene	<del>-</del> :	U
	Dibromochloromethane	<u> </u>	U
	1,1,2-Trichloroethane	<b>-</b> :	U
71-43-2		<del>-</del> ;	U
	trans-1,3-Dichloropropene	- i	U
75-25-2	Bromoform 4-Methyl-2-pentanone	_	U
108-10-1	4-Methyl-2-pentanone	_   5	U
: 591-78-6	2-Hexanone		ָּט
	Tetrachloroethene		U
79-34-5	1,1,2,2-Tetrachloroethane	<del>-</del> .	U
	1,2-Dibromoethane	÷ :	U
108-88-3			U
108-90-7	Chlorobenzene	_	U
100-41-4	Ethylbenzene	_ ! 1	U
100-42-5	Styrene	_	U
1330-20-7	Xylenes (total)		U
541-73-1	1,3-Dichlorobenzene	<del>-</del> .	U
	1,4-Dichlorobenzene	_	U
	1,2-Dichlorobenzene	-	U
	1,2-Dibromo-3-chloropropane	_	U
120-82-1	1,2,4-Trichlorobenzene	_	U
i		_	1

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EOOFH

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.005

Date Received: 05/03/00

Lab File ID: F1166

Date Analyzed: 05/08/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q =====
1.000060-29-7	Ethyl ether	6.82		JN
2		! !		
3		İ		
5.		<u> </u>	<del></del>	
6.				
7.		i ————		<del></del>
8.	1	1		
9				
10.		İ		
10		<u> </u>		
13.		i ————		<del></del>
14.	1	i	<del></del>	
15.		!		
16				
17.				
18		ļ ————		
20.		<u> </u>		·
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22.		i ————	<del></del>	
23.		]		
24				
25.		i		
26. 27.		]		
120		ļ ———	l ——————	
29.		<u> </u>		
30.		İ		i
		i ———	<del></del>	



EPA SAMPLE NO.

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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6050.006

Date Received: 05/03/00

Lab File ID: F1167

Date Analyzed: 05/08/00

Purge Volume: 20

Lab Code: PDP

(mL)

Dilution Factor: 1.0

GC Column: DB-624

ID: 0.53 (mm) Length: 60

(m)

CONCENTRATION CAS NO. COMPOUND (ug/L) Q 74-87-3-----Chloromethane 1 U 74-83-9-----Bromomethane 1 U 1 0 75-01-4------Vinyl chloride\_ 1 U 75-00-3-----Chloroethane 75-09-2-----Methylene chloride 2 U 67-64-1-----Acetone 5 U 75-15-0-----Carbon disulfide 1 U 75-35-4-----1,1-Dichloroethene 1 U 75-34-3-----1,1-Dichloroethane 1 U 156-59-2----cis-1,2-Dichloroethene 1 U 1 | U 156-60-5-----trans-1,2-Dichloroethene 67-66-3-----Chloroform 3 | 107-06-2----1, 2-Dichloroethane 1 | U 5 U 78-93-3-----2-Butanone 74-97-5-----Bromochloromethane 1 | U 71-55-6-----1,1,1-Trichloroethane\_ 1 U 56-23-5-----Carbon tetrachloride\_ 1 U 75-27-4-----Bromodichloromethane 2 78-87-5-----1,2-Dichloropropane\_ 1 | U 10061-01-5----cis-1,3-Dichloropropene\_ 1 | U 79-01-6-----Trichloroethene 1 U 124-48-1-----Dibromochloromethane 2 79-00-5-----1,1,2-Trichloroethane 1 | U 1 0 71-43-2-----Benzene 10061-02-6----trans-1,3-Dichloropropene 1 U 75-25-2-----Bromoform 1 5 | U 108-10-1-----4-Methyl-2-pentanone 591-78-6----2-Hexanone 5 | U 1 | U 127-18-4-----Tetrachloroethene 1 U 79-34-5-----1,1,2,2-Tetrachloroethane\_ 1 U 106-93-4-----1,2-Dibromoethane 108-88-3-----Toluene 1 U 108-90-7-----Chlorobenzene 1 U 100-41-4-----Ethylbenzene 1 U 100-42-5-----Styrene 1 U 1330-20-7-----Xylenes (total) 1 U 1 U 541-73-1-----1,3-Dichlorobenzene 1 | U 106-46-7-----1,4-Dichlorobenzene 95-50-1-----1,2-Dichlorobenzene 1 0 1 U 96-12-8-----1,2-Dibromo-3-chloropropane 1 | U 120-82-1-----1,2,4-Trichlorobenzene

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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E00FJ

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6050.006

Date Received: 05/03/00

Lab File ID: F1167

Date Analyzed: 05/08/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.		-	! !	
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6.		_		
7.		_	i <del></del>	
8.		_	1	1
9.		_		
10				
11				1
12		_		
13		_		
14				
15.			1	
16		_ !		
17			1	
18				
19				
20				
21				
22				<u> </u>
23				
24				
25				1
26 ;		_		1
27				1
28				
29				
30		_		1



LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EOOFK

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: 6050.007 Date Received: 05/03/00

Lab File ID: F1168 Date Analyzed: 05/08/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
	Chloromethane		U
·='	Bromomethane	1	U
	Vinyl chloride		טן
	Chloroethane	1	ŭ
75-09-2	Methylene chloride	2	U
67-64-1		5	U
	Carbon disulfide	1	U I
	1,1-Dichloroethene	1	U
	1,1-Dichloroethane	1	ן טן
156-59-2	cis-1,2-Dichloroethene	1	ן טן
156-60-5	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
	2-Butanone	5	U
	Bromochloromethane	1	U
	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride		Ū
	Bromodichloromethane	:	i u
	1,2-Dichloropropane	i	Ū
	cis-1,3-Dichloropropene		Ü
79-01-6	Trichloroethene	:	Ü
	Dibromochloromethane	· ·	บ
. 79-00-5	1,1,2-Trichloroethane	: -	บ
71-43-2			บ
	trans-1,3-Dichloropropene	:	บ
	Bromoform	:	บ
	4-Methyl-2-pentanone	: -	บ
	2-Hexanone		ט
	Tetrachloroethene	ì	י טו טו
	1,1,2,2-Tetrachloroethane	-	: -
		_	U
	1,2-Dibromoethane	:	U
108-88-3		-	l U
	Chlorobenzene	:	Ü
	Ethylbenzene	:	U
100-42-5		: -	U
	Xylenes (total)	_	U
541-73-1	1,3-Dichlorobenzene	i	ប្រ
	1,4-Dichlorobenzene	i	ט !
95-50-1	1,2-Dichlorobenzene	: -	U
	1,2-Dibromo-3-chloropropane_	4	U
120-82-1	1,2,4-Trichlorobenzene	1	U
1			!!

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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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	- 1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: 6050.007

Date Received: 05/03/00

Lab File ID: F1168

Date Analyzed: 05/08/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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2. ————————————————————————————————————				
		<u> </u>	<del>4</del>	<u> </u>
4.		[		i
5.				i
6.		i ————————————————————————————————————		i
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8				
9				
10		İ		<u> </u>
11		i		i
12.		l		ļ ———
13.		l		¦
14.				!
16		<u> </u>	<del></del>	!
17.		ļ		ļ——
18.		i		i ———
19.		i ————————————————————————————————————		
20.		i ————————————————————————————————————		
21.		! !		!
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23.				
24		İ	<del></del>	<u> </u>
25				i
26.		li		i ———
27.		li		ļ
28.		\		<del> </del>
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LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

E00FL

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.002

Date Received: 05/03/00

Lab File ID: F1145

Date Analyzed: 05/05/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

74-87-3	Chloromethane	(ug/L)	Q
174-83-9	Chloromethane		
174-83-9	Chloromethane	1 - 1	
		- ]	
I		1	
75-01-4	Vinyl chloride	.   1	
	Chloroethane	1	
	Methylene chloride		
67-64-1	Acetone	5	
	Carbon disulfide	_	
	1,1-Dichloroethene		
75-34-3	1,1-Dichloroethane		
156-59-2	cis-1,2-Dichloroethene		
	trans-1,2-Dichloroethene	_	
	Chloroform	_ [ 1 ]	
	1,2-Dichloroethane		
	2-Butanone	_ [ 5	
	Bromochloromethane	_ {	U
71-55-6	1,1,1-Trichloroethane	_	U
56-23-5	Carbon tetrachloride	_	U
75-27-4	Bromodichloromethane		U
1 78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene	1	U
124-48-1	Dibromochloromethane	1	υ
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2			U
	trans-1,3-Dichloropropene	1	U
75-25-2	Bromoform	1	U
108-10-1	4-Methyl-2-pentanone	5	U
591-78-6	2-Hexanone		U
127-18-4	2-Hexanone Tetrachloroethene	- į	บ
79-34-5	1,1,2,2-Tetrachloroethane	- i 1	U
106-93-4	1,2-Dibromoethane	- i	Ū
108-88-3	Toluene	- i	บ
108-90-7	Chlorobenzene		Ū
100-41-4	Ethylbenzene	$\overline{1}$	Ū
100-42-5	Styrene	- 1	Ū
	Xylenes (total)	<b>= :</b>	Ū
	1,3-Dichlorobenzene	<b>=</b> :	Ū
	1,4-Dichlorobenzene	<del>-</del> :	บ
	1,2-Dichlorobenzene	<b>=</b> ?	บ
	1,2-Dibromo-3-chloropropane	<b>.</b> '	Ŭ
	1,2,4-Trichlorobenzene		Ŭ
1 120-02-1	1,2,4-1110H10L0DeH2eHe	- [	, U

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.002

Date Received: 05/03/00

Lab File ID: F1145

Date Analyzed: 05/05/00

Purge Volume: 20 (mL) . Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q =====
1 3		 		
4 . 5 .				
6. 7. 8.				
9.  10.  11.				
12				
15				
18. 19. 20.				
21				
24   25   26				
27 .		]		
30.				



LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

E01TP

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Date Received: 05/05/00 Lab Sample ID: 6066.010

Lab File ID: E0887 Date Analyzed: 05/12/00

Dilution Factor: 1.0 Purge Volume: 20 (mL)

1	CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
75-01-4	74-87-3	Chloromethane	1	U
75-00-3	74-83-9	Bromomethane	1	ן ט
75-09-2	75-01-4	Vinyl chloride	1	ן ט
67-64-1	75-00-3	Chloroethane	1	ט
75-15-0	75-09-2	Methylene chloride	2	ט
75-35-4			5	ט ו
75-34-31,1-Dichloroethane   1   U   156-59-2cis-1,2-Dichloroethene   1   U   67-66-3trans-1,2-Dichloroethene   1   U   67-66-3			1	U
156-59-2cis-1,2-Dichloroethene			1	U
156-60-5trans-1,2-Dichloroethene	75-34-3	1,1-Dichloroethane	3	
67-66-3	156-59-2	cis-1,2-Dichloroethene	.   1	U
107-06-21,2-Dichloroethane	156-60-5	trans-1,2-Dichloroethene		
78-93-32-Butanone       5 U         74-97-5Bromochloromethane       1 U         71-55-61,1,1-Trichloroethane       1 U         56-23-5Carbon tetrachloride       1 U         75-27-4Bromodichloromethane       1 U         78-87-51,2-Dichloropropane       1 U         10061-01-5cis-1,3-Dichloropropene       1 U         79-01-6Trichloroethene       1 U         124-48-1Dibromochloromethane       1 U         79-00-51,1,2-Trichloroethane       1 U         71-43-2Benzene       1 U         10061-02-6trans-1,3-Dichloropropene       1 U         75-25-2Bromoform       1 U         108-10-14-Methyl-2-pentanone       5 U         591-78-62-Hexanone       1 U         127-18-4Tetrachloroethene       1 U         106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         100-42-5Styrene       1 U         100-42-5			1	U
74-97-5			• I	-
71-55-61,1,1-Trichloroethane			5	U .
56-23-5	74-97-5	Bromochloromethane		U
75-27-4Bromodichloromethane	71-55-6	1,1,1-Trichloroethane	.   1	U
78-87-51,2-Dichloropropane			1	U
10061-01-5cis-1,3-Dichloropropene			_	U
79-01-6Trichloroethene				:
124-48-1Dibromochloromethane	10061-01-5	cis-1,3-Dichloropropene		
79-00-51,1,2-Trichloroethane       1 U         71-43-2Benzene       1 U         10061-02-6trans-1,3-Dichloropropene       1 U         75-25-2Bromoform       1 U         108-10-14-Methyl-2-pentanone       5 U         591-78-62-Hexanone       5 U         127-18-4Tetrachloroethene       1 U         79-34-51,1,2,2-Tetrachloroethane       1 U         106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         109-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,2-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U			1	¦℧
71-43-2Benzene				
10061-02-6trans-1,3-Dichloropropene			• 1	7
75-25-2Bromoform			• I	-
108-10-14-Methyl-2-pentanone       5 U         591-78-62-Hexanone       5 U         127-18-4Tetrachloroethene       1 U         79-34-51,1,2,2-Tetrachloroethane       1 U         106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U			-	-
591-78-62-Hexanone       5 U         127-18-4Tetrachloroethene       1 U         79-34-51,1,2,2-Tetrachloroethane       1 U         106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         1330-20-7Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U				U
127-18-4Tetrachloroethene       1 U         79-34-51,1,2,2-Tetrachloroethane       1 U         106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U				•
79-34-51,1,2,2-Tetrachloroethane       1 U         106-93-41,2-Dibromoethane       1 U         108-88-3Toluene       1 U         108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U			_ \ 5	U
106-93-41, 2-Dibromoethane       1 U         108-88-3Toluene       1 U         108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U				Ū
108-88-3Toluene       1 U         108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U	79-34-5	1,1,2,2-Tetrachloroethane		U
108-90-7Chlorobenzene       1 U         100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7Xylenes (total)       1 U         541-73-11,3-Dichlorobenzene       1 U         106-46-71,4-Dichlorobenzene       1 U         95-50-11,2-Dichlorobenzene       1 U         96-12-81,2-Dibromo-3-chloropropane       1 U	106-93-4	1,2-Dibromoethane		
100-41-4Ethylbenzene       1 U         100-42-5Styrene       1 U         1330-20-7			- :	
100-42-5Styrene       1 U         1330-20-7			. 1	U
1330-20-7Xylenes (total)			• <u>.</u>	:
541-73-11,3-Dichlorobenzene			<u> </u>	7
106-46-71,4-Dichlorobenzene				:
95-50-11,2-Dichlorobenzene				
96-12-81,2-Dibromo-3-chloropropane				
			•	
1 120-82-11,2,4-Trichlorobenzene 1 U			1	¦U
	120-82-1	1,2,4-Trichlorobenzene	1	U

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

E01TP	

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: 6066.010

Date Received: 05/05/00

Lab File ID: E0887

Date Analyzed: 05/12/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

	<u></u>			
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
i	Methane, dichlorofluoro-	4.51		JN
3.				
5. 6.				
7. 8.				
9		[		
11 .   12 .   13 .				
14.				
117.				
19.				
20.				
22.				
24 .   25 .   26 .				
27.				
29.				
1		1		

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHELT

E01TQ

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Date Received: 05/05/00 Lab Sample ID: 6066.011

Date Analyzed: 05/12/00 Lab File ID: E0888

Dilution Factor: 1.0 Purge Volume: 20 (mL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74 07 3	Chloromethane	1 7	U
	Bromomethane	• ;	ប
	Vinyl chloride	- :	U
75-00-3	Chloroethane	• :	U
	Methylene chloride	• <u>;</u>	บ
67-64-1		- :	Ŭ
I	Carbon disulfide	_ •	U
	1,1-Dichloroethene	- ,	Ū
	1,1-Dichloroethane	- ;	Ū
	cis-1,2-Dichloroethene	- ;	U
	trans-1,2-Dichloroethene	~ .	U
	Chloroform	<u> </u>	บ
	1,2-Dichloroethane		Ū
•	2-Butanone	- :	U
	Bromochloromethane	-	U
	1,1,1-Trichloroethane		บ
	Carbon tetrachloride		U
	Bromodichloromethane	<b>.</b> :	U
	1,2-Dichloropropane		U
	cis-1,3-Dichloropropene	<b>-</b> ;	U
79-01-6	Trichloroethene		Ū
	Dibromochloromethane		U
	1,1,2-Trichloroethane	- :	Ū
71-43-2			U
10061-02-6	trans-1,3-Dichloropropene		U
75-25-2	Bromoform	<del>-</del> :	U
	4-Methyl-2-pentanone		บ
	2-Hexanone		Ū
	Tetrachloroethene	<b>-</b> .	U
	1,1,2,2-Tetrachloroethane		U
106-93-4	1,2-Dibromoethane		Ū
108-88-3		_ :	Ū
	Chlorobenzene	= i	ľu
	Ethylbenzene	1	U
100-42-5		<b>-</b> 1.	U
	Xylenes (total)	· 1	Ū
	1,3-Dichlorobenzene	- :	Ū
	1,4-Dichlorobenzene		Ū
	1,2-Dichlorobenzene	•	Ū
	1,2-Dibromo-3-chloropropane		ี่ ปั
	1,2,4-Trichlorobenzene		บ
		- <u>i</u>	<u>i</u> -

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

E01TQ

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.011

Date Received: 05/05/00

Lab File ID: E0888

Date Analyzed: 05/12/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000075-43-4 2.000060-29-7 3. 4. 5.	Methane, dichlorofluoro- Ethyl ether	4.52 5.15	5	JN JN 
7. 8. 9. 10. 11.				
13 .   14 .   15 .   16 .   17 .				
18				
24 .				
29.  30.				

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

ECFN2

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.003 Date Received: 05/05/00

Lab File ID: E0872 Date Analyzed: 05/11/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

	CONCENTRATIO		
CAS NO.	COMPOUND	(ug/L)	Q
74-97-3	Chloromethane	1	U
	Bromomethane		บี
	Vinyl chloride		ט
75-01-4	Chloroethane		ָ ט
	Methylene chloride		U
67-64-1	Acetone		U I
	Carbon disulfide	<del>-</del> :	บ
	1,1-Dichloroethene	<del></del> :	บ
	1,1-Dichloroethane	-   8	
156 50 0	I,I-DICHIOFOECHARE	<del>-</del> :	
156-59-2	cis-1,2-Dichloroethene	<b>- !</b>	Ü
156-60-5	trans-1,2-Dichloroethene	<del></del> -	U
	Chloroform		U
107-06-2	1,2-Dichloroethane	_ [ 1	ļŪ ļ
78-93-3	2-Butanone	<del></del> .	U
	Bromochloromethane		U
71-55-6	1,1,1-Trichloroethane	_	U
56-23-5	Carbon tetrachloride	1	U !
75-27-4	Bromodichloromethane	_	U
78-87-5	1,2-Dichloropropane	_ l	U
10061-01-5	cis-1,3-Dichloropropene		iu i
79-01-6	Trichloroethene		U
	Dibromochloromethane	<del>-</del> :	Ū
79-00-5	1,1,2-Trichloroethane	<b></b> :	Ū
71-43-2	Benzene	- 2	
	trans-1,3-Dichloropropene		<u></u>
75-25-2	Bromoform	<b>-</b> .	U
	4-Methyl-2-pentanone		: :
100-10-1	4-Methy1-2-pentanone		U
	2-Hexanone	<del>-</del> ;	U
12/-18-4	Tetrachloroethene		U
79-34-5	1,1,2,2-Tetrachloroethane	_! 1	U
	1,2-Dibromoethane		U
108-88-3		— :	U
108-90-7	Chlorobenzene		ប
100-41-4	Ethylbenzene	_	U I
100-42-5	Styrene	_	U
	Xylenes (total)	_	U !
541-73-1	1,3-Dichlorobenzene		U I
106-46-7	1,4-Dichlorobenzene	<del></del> .	U
	1,2-Dichlorobenzene	<del>-</del> .	Ū
	1,2-Dibromo-3-chloropropane		Ü
	1,2,4-Trichlorobenzene		U
120 02 1	1,2,4 111011010001120116	- [	
		1	· !

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

ECFN2

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.003

Date Received: 05/05/00

Lab File ID: E0872

Date Analyzed: 05/11/00

Purge Volume: 20 (mL) - Dilution Factor: 1.0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1. 000593-70-4 2. 000075-43-4 3. 000060-29-7 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24.	1		(ug/L) ====================================	! - !
25 .   26 .   27 .   28 .   29 .   30 .				

EPA SAMPLE NO.

Q

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

ECFN3 Contract: 68-D7-0004

CONCENTRATION

(ug/L)

Lab Name: PDP ANALYTICAL SERVICES

CAS NO.

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: E00FL

Date Received: 05/05/00 Lab Sample ID: 6066.004

Lab File ID: E0873 Date Analyzed: 05/11/00

Dilution Factor: 1.0 Purge Volume: 20 (mL)

GC Column: DB-624 ID: 0.53 (mm) Length: 60

COMPOUND

		33.12 3 31.2	(49/11/	. •
! !	74-87-3	-Chloromethane	1	U
!	74-83-9			U I
į	75-01-4			U
į	75-00-3			
į		-Methylene chloride		Ū
i	67-64-1			Ū
į		-Carbon disulfide		U
Ì		-1,1-Dichloroethene		Ū
i	75-34-3	-1,1-Dichloroethane	•	i
i		-cis-1,2-Dichloroethene		υ i
İ		-trans-1,2-Dichloroethene		U
į	67-66-3	-Chloroform		U
İ		-1,2-Dichloroethane	1	U
j	78-93-3		5	U
ļ	74-97-5	-Bromochloromethane	1	ט
	71-55-6	-1,1,1-Trichloroethane	1	U !
į	56-23-5	-Carbon tetrachloride	1	U
ļ	75-27-4	-Bromodichloromethane	1	U
1	78-87-5	-1,2-Dichloropropane	1	U
ļ	10061-01-5	-cis-1,3-Dichloropropene	1	U
ŀ		-Trichloroethene	1	U !
- 1	124-48-1	-Dibromochloromethane	1	ן טן
!		-1,1,2-Trichloroethane	1	U
i	71-43-2	-Benzene	2	
ŀ	10061-02-6	-trans-1,3-Dichloropropene	1	Ū
ŀ	75-25-2	-Bromoform	1	U
į		-4-Methyl-2-pentanone	5	ן טן
- 1	591-78-6		5	ן טן
		-Tetrachloroethene	1	ן טן
į		-1,1,2,2-Tetrachloroethane		ן טן
į		-1,2-Dibromoethane	Ī.	ן ט
i	108-88-3		-	U
1	108-90-7		1	U
		-Ethylbenzene		U
	100-42-5			U
į		-Xylenes (total)		U
	541-73-1	-1,3-Dichlorobenzene		U
	106-46-7	-1,4-Dichlorobenzene		U
		-1,2-Dichlorobenzene		ָט !
	96-12-8	-1,2-Dibromo-3-chloropropane_	1	U
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		_	1 1

120-82-1----1,2,4-Trichlorobenzene

1 | U

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

ECFN3

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.004

Date Received: 05/05/00

Lab File ID: E0873

Date Analyzed: 05/11/00

Purge Volume: 20 (mL)

. Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000593-70-4 2.000075-43-4 3.000060-29-7 4.000060-29-7 5. 6. 7. 8. 9.	Methane, chlorofluoro- Methane, dichlorofluoro- Ethyl ether Ethyl ether	!	4 3 2	! - !
27   28   29				
30.				



LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ECFN4

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.005 Date Received: 05/05/00

Lab File ID: E0874 Date Analyzed: 05/11/00

Dilution Factor: 1.0 Purge Volume: 20 (mL)

GC Column: DB-624 ID: 0.53 (mm) Length: 60

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	Ū
74-83-9	Bromomethane	1	U
75-01-4	Vinyl chloride	1	U
75-00-3	Chloroethane	2	
75-09-2	Methylene chloride	2	l Ū
67-64-1	Acetone		ប
	Carbon disulfide		U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
	Chloroform	[	ן ט
	1,2-Dichloroethane	_	ן ט
	2-Butanone	5	U
74-97-5	Bromochloromethane		ן ט
71-55-6	1,1,1-Trichloroethane	_	บ
56-23-5	Carbon tetrachloride		U
	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane		U
10061-01-5	cis-1,3-Dichloropropene	[ ]	ľυ
79-01-6	Trichloroethene		¦U ,
124-48-1	Dibromochloromethane	1	U
1 79-00-5	1,1,2-Trichloroethane	1	U
71-43-2		1	U
10061-02-6	trans-1,3-Dichloropropene	[	U
	Bromoform		U
108-10-1	4-Methyl-2-pentanone	5	U
	2-Hexanone	<b>[</b>   5	U
127-18-4	Tetrachloroethene		U
79-34-5	1,1,2,2-Tetrachloroethane	[	¦℧
	1,2-Dibromoethane	[	U
108-88-3		1	U
	Chlorobenzene	[	ַּט
	Ethylbenzene	1	U
100-42-5	Styrene	[	ប
1330-20-7	Xylenes (total)	_	U
	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	_	ן ט
	1,2-Dichlorobenzene	1	U
	1,2-Dibromo-3-chloropropane	-   1	U
	1,2,4-Trichlorobenzene		U
1		-	1

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

ECFN4

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.005

Date Received: 05/05/00

Lab File ID: E0874

Date Analyzed: 05/11/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

1.000593-70-4 Methane, chlorofluoro- 3.25 4 JN 2.1000221-95-9 Ethene, ethyloxy- 5.23 4 JN 3. 4	 CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
22 .	1.000593-70-4 2.1000221-95-9 3.4.5 5.6.7.88.99.10.11.11.12.13.14.15.16.17.18.19.120.122.122.122.122.122.122.122.122.122	Methane, chlorofluoro-	1 :	4	===== JN



LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

ECFN5

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.006

Date Received: 05/05/00

Lab File ID: E0875

Date Analyzed: 05/11/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	· · · · · · · · · · · · · · · · · · ·	ווּט
	Bromomethane		LU
	Vinyl chloride		1!
	Chloroethane		บี
	Methylene chloride		2 0
67-64-1			5   U
	Carbon disulfide		נוֹט
	1,1-Dichloroethene	• 🕻	เป็น
	1,1-Dichloroethane		3 1
156-59-2	cis-1,2-Dichloroethene		í
156-60-5	trans-1,2-Dichloroethene		ווֹ ד
	Chloroform	· i	ווֹט
	1,2-Dichloroethane		ı U
! 70-03-3	2-Butanone		5 U
	Bromochloromethane		ווט
	1,1,1-Trichloroethane		ווט
/1-33-6	Carbon tetrachloride		- : -
56-23-5	Carbon tetrachioride	• :	l U
	Bromodichloromethane	• •	l¦U
	1,2-Dichloropropane	. :	1
	cis-1,3-Dichloropropene		l U
	Trichloroethene	• •	l U
124-48-1	Dibromochloromethane	• :	l U
79-00-5	1,1,2-Trichloroethane		ווֹט
71-43-2			l U
10061-02-6	trans-1,3-Dichloropropene		ווט
	Bromoform_	•	ıļU
	4-Methyl-2-pentanone	• -	5 <b> </b> U
	2-Hexanone		5 U
	Tetrachloroethene		1 U
79-34-5	1,1,2,2-Tetrachloroethane		l U
106-93-4	1,2-Dibromoethane	. :	l U
108-88-3	Toluene		L U
108-90-7	Chlorobenzene		וו
100-41-4	Ethylbenzene		נוט
100-42-5	Styrene		l U
	Xylenes (total)	. •	ı İ U
	1,3-Dichlorobenzene		נוְּט
	-,1,4-Dichlorobenzene		וןט
	1,2-Dichlorobenzene		l U
96-12-8	1,2-Dibromo-3-chloropropane_	.	1   U
120-82-1	1,2,4-Trichlorobenzene		1   U
<b>!</b>		1	_{

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

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$r \subset r$	TA O

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.006

Date Received: 05/05/00

Lab File ID: E0875

Date Analyzed: 05/11/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

		1 .		
CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000075-43-4 2.000060-29-7 3.	Methane, dichlorofluoro- Ethyl ether	4.55 5.19	7	JN JN
5. 6. 7.				
9. 10. 11.				
13. 14. 15.				
17. 18. 19.				
21				
25. 26. 27.				
29. 30.				

EPA SAMPLE NO. LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

ECFN6

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Date Received: 05/05/00 Lab Sample ID: 6066.007

Date Analyzed: 05/11/00 Lab File ID: E0876

Dilution Factor: 1.0 Purge Volume: 20 (mL)

GC Column: DB-624 ID: 0.53 (mm) Length: 60

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74 97 3	Chloromethane	1	U
	Bromomethane		U
	Vinyl chloride	1	;
	Chloroethane	· -	Ū
	Methylene chloride		U
67-64-1		· ·	Ū
	Carbon disulfide		Ū
75-35-4	1,1-Dichloroethene	_	Ū
	1,1-Dichloroethane	7	i
	cis-1,2-Dichloroethene	i	
156-60-5	trans-1,2-Dichloroethene	. :	<del>0</del>
67-66-3	Chloroform		U
	1,2-Dichloroethane	_	Ū
	2-Butanone	•	Ū
	Bromochloromethane	· I	Ū
	1,1,1-Trichloroethane		U
56-23-5	Carbon tetrachloride		Ū
	Bromodichloromethane	• 🖟	Ü
	1,2-Dichloropropane	1	1
10061-01-5	cis-1,3-Dichloropropene		Ū
79-01-6	Trichloroethene		Ū
124 - 40 - 1	Dibromochloromethane		U
	1,1,2-Trichloroethane	_	U .
71-43-2		· •	ט
	trans-1,3-Dichloropropene		ט
75-25-2		• 🗼	บ
		. •	U
E01 70 C	·2-Hexanone	· <u>·</u>	1
	·Tetrachloroethene		U U
70 24 5	1,1,2,2-Tetrachloroethane		
106 02 4	1 2 Dibrarathana	· •	U
108-88-3	1,2-Dibromoethane		U
		· i	U
108-90-/	Chlorobenzene		U
100-41-4	Ethylbenzene		U
100-42-5		_	Ü
1330-20-/	Xylenes (total)		U
	1,3-Dichlorobenzene		U
	1,4-Dichlorobenzene	· 🗼	Ü
	1,2-Dichlorobenzene	. 1	U
	1,2-Dibromo-3-chloropropane_	•	Ŭ
120-82-1	1,2,4-Trichlorobenzene	. i	U
l <u></u>		i	i

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EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

ECFN8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL Date Received: 05/05/00 Lab Sample ID: 6066.008

Lab File ID: E0885 Date Analyzed: 05/12/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

Number TICs found: 2

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000593-70-4 2.000060-29-7 3.	Methane, chlorofluoro- Ethyl ether	3.22 5.16		JN JN
4. 5. 6.				
8. 9.				
12   13   14				
15.   16.   -7.   (18.				
19 .				
23 .				
26 .				
30.				

EPA SAMPLE NO. LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

ECFN9

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Date Received: 05/05/00 Lab Sample ID: 6066.009

Date Analyzed: 05/12/00 Lab File ID: E0886

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	1	U
	Vinyl chloride	1	U
75-00-3	Chloroethane	1	U
75-09-2	Methylene chloride	2	!
67-64-1		5	Ū
75-15-0	Carbon disulfide	1	U
	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
156-59-2	cis-1,2-Dichloroethene	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
67-66-3	Chloroform	1	ľυ
107-06-2	1,2-Dichloroethane	1	U
	2-Butanone	5	U
74-97-5	Bromochloromethane		U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride		U
75-27-4	Bromodichloromethane	1	U
	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
79-01-6	Trichloroethene		υ
124-48-1	Dibromochloromethane	1	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2		1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
75-25-2	Bromoform		U
108-10-1	4-Methyl-2-pentanone	5	U
591-78-6	2-Hexanone		U
	Tetrachloroethene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-88-3		1	U
108-90-7	Chlorobenzene	1	U
	Ethylbenzene	1	U
100-42-5		1	U
	Xylenes (total)		U
	1,3-Dichlorobenzene		Ū
	1,4-Dichlorobenzene	•	Ū
	1,2-Dichlorobenzene		Ū
	1,2-Dibromo-3-chloropropane		Ū
		•	, –

#### 1LCE

EPA SAMPLE NO.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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20212	- 1
ECFN9	i
	- 1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.009

Date Received: 05/05/00

Lab File ID: E0886

Date Analyzed: 05/12/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.		 		
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5		<u> </u>		
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11.		ļ	<del></del>	
13.		i		
14.		į———		
15		ii		
16				
17.		j	<del></del>	
19.		<u> </u>		
20		i ———		
21		i		
22.				
23		İ		
24		i		
26		<u> </u>		
27				
28		i		
29.		1		
30				

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ECFP1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.012 Date Received: 05/05/00

Lab File ID: E0889 Date Analyzed: 05/12/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	1	U
	Bromomethane	- :	Ū
	Vinyl chloride	<del>-</del> :	บ
75-00-3	Chloroethane	<del>-</del> :	Ū
	Methylene chloride	<del></del> '	์ ปั
67-64-1		<b>-</b> :	Ū
	Carbon disulfide		U
75-35-4	1,1-Dichloroethene	<del>-</del> :	U
75-34-3	1,1-Dichloroethane	1	lυ
156-59-2	cis-1,2-Dichloroethene	- i 1	U
156-60-5	trans-1,2-Dichloroethene	_ i	U
	Chloroform	<del>-</del> .	U
107-06-2	1,2-Dichloroethane	1	U
	2-Butanone		ľυ
	Bromochloromethane	<del>-</del> :	U
	1,1,1-Trichloroethane	- i 1	Ū
56-23-5	Carbon tetrachloride		Ū
	Bromodichloromethane	— :	U
	1,2-Dichloropropane	<b>-</b> '	Ū
10061-01-5	cis-1,3-Dichloropropene		Ū
79-01-6	Trichloroethene	1	Ū
124-48-1	Dibromochloromethane	- <u>i</u>	Ū
	1,1,2-Trichloroethane		Ū
71-43-2		<del>-</del> :	Ū
	trans-1,3-Dichloropropene		. บ
	Bromoform		. บ
108-10-1	4-Methyl-2-pentanone	- ·	Ū
591-78-6	2-Hexanone	<b>-</b> :	Ū
127-18-4	Tetrachloroethene	<del></del>	. เบ
	1,1,2,2-Tetrachloroethane		Ū
106-93-4	1,2-Dibromoethane		Ū
108-88-3	Toluene	<del>- :</del>	Ū
	Chlorobenzene		Ū
100-41-4	Ethylbenzene	- i - i	Ū
100-42-5	Styrene	- i - 1	ปั
1330-20-7	Xylenes (total)		U
541-73-1	1,3-Dichlorobenzene		Ū
	1,4-Dichlorobenzene		Ū
	1,2-Dichlorobenzene		U
	1, 2-Dibromo-3-chloropropane	<del></del>	. U
	1,2,4-Trichlorobenzene	<del></del> .	.   บ
,	_, _,	- <u>i</u>	Ï
		<del>- ·</del>	· ——

#### 1LCE

EPA SAMPLE NC.

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

ECFP1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.012

Date Received: 05/05/00

Lab File ID: E0889

Date Analyzed: 05/12/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1				
2.		- ii		
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		- [		
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9.		- i		i ——
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11.				
12.		_		ļ
13.		-		i
14.		-  i		
15. 16.		- [		ļ
17		-		<u> </u>
18.		- !i		
19				
20.				İ
21.		-		İ
22.		-  i		!
23.		-		ļ
25		-		i
26		- <u> </u>		!
27				
28		_  !		
29.		- İİ		<u> </u>
30.		-		į

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

VLCS65

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: FVLCS069

Date Received: \_\_\_\_\_

Lab File ID: F1143

Date Analyzed: 05/05/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

74-87-3		U
	1	. – 1
		ן ט
75-01-4Vinyl chloride	4	
75-00-3Chloroethane	1	Ū
75-09-2Methylene chloride	2	U
67-64-1Acetone	5	U
75-15-0Carbon disulfide	1	ן ט
75-35-41,1-Dichloroethene	1	U
75-34-31,1-Dichloroethane	1	U ¦
156-59-2cis-1,2-Dichloroethene	1	ן ט
156-60-5trans-1,2-Dichloroethene	1	U
67-66-3Chloroform	1	ן ט ן
107-06-21,2-Dichloroethane	7	l
78-93-32-Butanone	5	U
74-97-5Bromochloromethane	1	U
71-55-61,1,1-Trichloroethane	1	U
56-23-5Carbon tetrachloride	6	
75-27-4Bromodichloromethane	1	U
78-87-51,2-Dichloropropane	6	ļ
10061-01-5cis-1,3-Dichloropropene	6	
79-01-6Trichloroethene	6	:
124-48-1Dibromochloromethane	= -	U
79-00-51,1,2-Trichloroethane	6	
71-43-2Benzene	6	:
10061-02-6trans-1,3-Dichloropropene		U
75-25-2Bromoform	7	
108-10-14-Methyl-2-pentanone		U
591-78-62-Hexanone		U
127-18-4Tetrachloroethene	6	
79-34-51,1,2,2-Tetrachloroethane		ប
106-93-41,2-Dibromoethane	6	
108-88-3Toluene		U
	_	U
100-41-4Ethylbenzene 100-42-5Styrene	_	ប  ប
1330-20-7Xylenes (total)		្រ  ប
541-73-11,3-Dichlorobenzene		ี้ ปั
106-46-71,4-Dichlorobenzene	6	
95-50-11,2-Dichlorobenzene		Ū
96-12-81,2-Dibromo-3-chloropropane		U
120-82-11,2,4-Trichlorobenzene		U
1 120 02 1 1,2,4 III chilorobehizehe		

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VLCS66

Lab Name: PDP ANALYTICAL SERVICES

Contract: 68-D7-0004

Lab Code: PDP

Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: FVLCS070

Date Received:

Lab File ID: F1165

Date Analyzed: 05/08/00

Purge Volume: 20 (mL)

Dilution Factor: 1.0

GC Column: DB-624 ID: 0.53 (mm) Length: 60

(m)

CONCENTRATION CAS NO. COMPOUND 0 (ug/L) 74-87-3-----Chloromethane 1 | U 74-83-9-----Bromomethane 1 U 75-01-4-----Vinyl chloride 4 1 0 75-00-3-----Chloroethane 75-09-2-----Methylene chloride 2 U 67-64-1-----Acetone 5 U 75-15-0-----Carbon disulfide 1 U 1 U 75-35-4-----1,1-Dichloroethene 75-34-3-----1,1-Dichloroethane 1 U 156-59-2-----cis-1,2-Dichloroethene 1 U 156-60-5-----trans-1,2-Dichloroethene 1 | U 67-66-3------Chloroform 1 | U 107-06-2----1,2-Dichloroethane 7 5 | U 78-93-3----2-Butanone 74-97-5-----Bromochloromethane\_ 1 | U 71-55-6-----1,1,1-Trichloroethane 1 | U 56-23-5-----Carbon tetrachloride 61 75-27-4-----Bromodichloromethane 1 U 78-87-5-----1,2-Dichloropropane 61 10061-01-5----cis-1,3-Dichloropropene 6 79-01-6-----Trichloroethene 61 1|0 124-48-1-----Dibromochloromethane 79-00-5-----1,1,2-Trichloroethane 61 71-43-2-----Benzene 61 10061-02-6----trans-1,3-Dichloropropene 1 | U 75-25-2-----Bromoform 7! 5 | U 108-10-1-----4-Methyl-2-pentanone 591-78-6-----2-Hexanone 5 U 127-18-4-----Tetrachloroethene 6¦ 79-34-5-----1,1,2,2-Tetrachloroethane 1 | U 106-93-4-----1,2-Dibromoethane 5 1 | U 108-88-3-----Toluene 108-90-7-----Chlorobenzene 1 0 100-41-4-----Ethylbenzene 1 U 100-42-5-----Styrene 1 | U | 1330-20-7-----Xylenes (total) 1 0 1 U 541-73-1-----1,3-Dichlorobenzene 6 106-46-7-----1,4-Dichlorobenzene 1 | U 95-50-1-----1,2-Dichlorobenzene\_\_ 1 | U 96-12-8-----1,2-Dibromo-3-chloropropane\_ 120-82-1----1,2,4-Trichlorobenzene\_\_\_ 1 | U



LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

LPA	SAMPLE	NO.

VLCS02

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: EVLCS02 Date Received: \_\_\_\_\_

Lab File ID: E0866 Date Analyzed: 05/11/00

Purge Volume: 20 (mL) Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
74-87-3	Chloromethane	1	U
174-83-9	Bromomethane	1	Ŭ l
75-01-4	Vinyl chloride	5	
	Chloroethane	1	Ū
75-09-2	Methylene chloride	2	U !
67-64-1		1 5	U
75-15-0	Carbon disulfide	1	U
	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U [
156-59-2	cis-1,2-Dichloroethene	1	ן ט
156-60-5	trans-1,2-Dichloroethene	1	ן טן
	Chloroform	1	U I
107-06-2	1,2-Dichloroethane	·   5	
	2-Butanone	·   5	Ū
	Bromochloromethane	1	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	5	
	Bromodichloromethane	1	Ū
	1,2-Dichloropropane	5	İ
	cis-1,3-Dichloropropene	5	i —— i
79-01-6	Trichloroethene	5	i — i
	Dibromochloromethane	• •	i <del>u i</del>
	1,1,2-Trichloroethane	5	i i
71-43-2		5	i — i
	trans-1,3-Dichloropropene	1	Ū
75-25-2		5	j i
	4-Methyl-2-pentanone		Ū
591-78-6	2-Hexanone		ָ ט
	Tetrachloroethene	5	i i
	1,1,2,2-Tetrachloroethane	' i	Ū i
	1,2-Dibromoethane	5	i i
108-88-3		· i	Ū I
	Chlorobenzene	· i	Ū
	Ethylbenzene	· <b>:</b>	Ū
100-42-5		. :	Ū
	Xylenes (total)	• :	Ū
	1,3-Dichlorobenzene	· i 5	
	1,4-Dichlorobenzene	5	
	1,2-Dichlorobenzene	•	Ū
	1,2-Dibromo-3-chloropropane		Ū
	1,2,4-Trichlorobenzene		Ū
		· <b>i</b>	

LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

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VLCS03	- 1
	1

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Date Received: Lab Sample ID: EVLCS03

Lab File ID: E0883 Date Analyzed: 05/12/00

Purge Volume: 20 Dilution Factor: 1.0 (mL)

GC Column: DB-624 ID: 0.53 (mm) Length: 60 (m)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
	Chloromethane	1	U
	Bromomethane	1	U
75-01-4	Vinyl chloride	4	1
	Chloroethane	1	U
75-09-2	Methylene chloride	2	U
67-64-1		5	U
	Carbon disulfide	1	U
	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	Ū
	cis-1,2-Dichloroethene	1	U
	trans-1,2-Dichloroethene	1	Ū
67-66-3	Chloroform	į į	Ū
	1,2-Dichloroethane	5	: :
78-93-3	2-Butanone	•	<del>U</del>
	Bromochloromethane		บ
71-55-6	1,1,1-Trichloroethane	· ·	Ū
. 71 33 6 ! 56-23-5	Carbon tetrachloride	5	:
1 75-27-4	Bromodichloromethane	1	<del>-</del> -
	1,2-Dichloropropane	5	
10061-01-5	cis-1,3-Dichloropropene	5	
79-01-6	Trichloroethene	5	
	Dibromochloromethane	i :	Ū
	1,1,2-Trichloroethane	5	
71-43-2		5	
	trans-1,3-Dichloropropene	i	<del>u</del>
75-25-2		5	
	4-Methyl-2-pentanone		<del>U</del>
. 100 10 1   591-78-6	2-Hexanone	:	Ū
	Tetrachloroethene	5	
	1,1,2,2-Tetrachloroethane		<del></del>
	1,2-Dibromoethane	5	_
108-88-3		·	<del></del>
	Chlorobenzene	:	ָּט ,
	Ethylbenzene	:	ט ו
100-42-5		· ·	ט
	Xylenes (total)	1	ט
	1,3-Dichlorobenzene	5	
106-46-7	1,4-Dichlorobenzene	5	:
	1,4-Dichlorobenzene		<del>ਹ</del> —
	1,2-Dichiorobenzene	i .	: :
			U
1 120-02-1	1,2,4-Trichlorobenzene	1	U
t		1	l į

#### 2LCB LOW CONC. WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

	EPA	NBZ	FBP	TPH	PHL	2FP	•	OTHER	•
	SAMPLE NO.	%REC #	%REC #	%REC #	%REC #	%REC #	%REC #		OUT
į	=====================================	= = = = =	= = = = = = = = = = = = = = = = = = =		=====   	=====		=====	
,	SBLK44	85	82	104	85	89	89		0
•	SLCS73	76	74	10.0	81	79	89		0
•	EOOFF	91	66	22	94	84	90		O I
	E00FG	83	82	96	71	71	95		0
	EOOFH	86	83	98	90	79	94		0
	EOOFJ	82	80	93	77	70	88		0
•	EOOFK	81	71	93	79	79	82		0 ;
	E00F4	88	81	33	95	91	93		0
•	SBLK47	82	70	91	80	82	85 ¦		0 ;
	SLCS76	78	72	94	80	72	83		0 !
•	E00F5	79	71	90	67	74	88		0
	ECFN2	67	67	78	70	63	86		0
	ECFN3	66	60	71	70	64	82		0
	ECFN4	63	60	79	63	63	77		0
	ECFN5	84	71	52	91	76	88		0
	ECFN6	70	66	41	63	63	82		0
•	ECFN8	67	62	82	62	64	84		0 ;
	E01TP	95	84	85	79	96	97		0 !
	E01TQ	89	83	92	81	93	92		0 1
20	ECFP1	76	72	90	72	75	90		¦o
21	 	 				<u></u>	 		
22	 								
23	i	! <u> </u>				 	 		
24		!! !!	   <u></u> -	 	 			·	
25	l 	[				 	 		
26	i	! !	 			 	! !		! !!
27		1 1	 	 	 	 	 		
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29		i				 	 		
30		 			 	 	 		

### QC LIMITS

# %REC

			- SICEC
NBZ	=	Nitrobenzene-d5	(23-120)
FBP	=	2-Fluorobiphenyl	(30-115)
TPH	=	Terphenyl-d14	(18-140)
PHL	=	Phenol-d5	(15-115)
2FP	=	2-Fluorophenol	(15-121)
TBP	=	2,4,6-Tribromophenol	(15-130)

<sup>#</sup> Column to be used to flag recovery values.
\* Values outside of contract required QC limits.

D Surrogate diluted out.

#### 3 LCB

LOW CONC. WATER SEMIVOLATILE LAB CONTROL SAMPLE RECOVERY

EPA SAMPLE NO.

SLCS73

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: SVOL605

LCS Lot No.:

Lab File ID: H1031

Date Extracted: 05/05/00

LCS Aliquot: 1000 (uL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

COMPOUND	AMOUNT ADDED (ng)	AMOUNT RECOVERED (ng)	%REC #	QC LIMITS
	======	========	=====	=====
Phenol	40000	30000	75	40-120
bis(2-Chloroethyl)ether	20000	16000	80	50-110
2-Chlorophenol	40000	30000	75	50-110
N-Nitroso-di-n-propylamine	20000	16000	80	30-110
Hexachloroethane	20000	10000	50	20-110
Isophorone	20000	12000	60	50-110
Naphthalene	20000	15000	75	30-110
4-Chloroaniline	40000	22000	55	10-120
2,4,6-Trichlorophenol	40000	32000	80	40-120
2,4-Dinitrotoluene	20000	11000	55	30-120
Diethylphthalate	20000	14000	70	50-120
N-Nitrosodiphenylamine	20000	10000	50	30-110
Hexachlorobenzene	20000	12000	60	40-120
Benzo(a)pyrene	20000	16000	80	50-120
	!	l	 	!

LCS Recovery: 0 outside limits out of 14 total.

COMMENTS:	

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

<sup>\*</sup> Values outside of QC limits.

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE LAB CONTROL SAMPLE RECOVERY

SLCS76

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: SVOL608

LCS Lot No.:

Lab File ID: H1039

Date Extracted: 05/09/00

LCS Aliquot: 1000 (uL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL)- Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

1	TRUOMA	AMOUNT		
1	ADDED	RECOVERED		QC
COMPOUND	(ng)	(ng)	%REC #	LIMITS
	======		=====	=====
Phenol	40000	30000	75	40-120
bis(2-Chloroethyl)ether_	20000	17000	85	50-110
2-Chlorophenol	40000	30000	75	50-110
'N-Nitroso-di-n-propylamine	20000	19000	95	30-110
Hexachloroethane	20000	10000	50	20-110
Isophorone	20000	11000	55	50-110
Naphthalene	20000	15000	75	30-110
4-Chloroaniline	40000	27000	68	10-120
2,4,6-Trichlorophenol	40000	30000	75	40-120
2,4-Dinitrotoluene	20000	11000	55	30-120
Diethylphthalate	20000	13000	65	50-120
N-Nitrosodiphenylamine	20000	12000	60	30-110
Hexachlorobenzene	20000	12000	60	40-120
Benzo(a)pyrene	20000	15000	75	50-120
		1		

LCS Recovery: 0 outside limits out of 14 total.

COMMENTS:	

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

<sup>\*</sup> Values outside of QC limits.

SBLK44

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: SVOB717

Date Extracted: 05/05/00

Lab File ID: H1030

Date Analyzed: 05/16/00

Instrument ID: H-HP5973

Time Analyzed: 1311

#### THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

	. <del></del>			
	EPA	LAB	LAB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
	========	=========	=========	========
01	SLCS73	SVOL605	H1031	05/16/00
02	!	6050.003	H1032	05/16/00
03	•	6050.004	H1033	05/16/00
04	:	6050.005	H1034	05/16/00
	·	•	,	05/16/00
05	1	6050.006	H1035	
06	•	6050.007	H1036	05/16/00
07	E00F4	6050.008	H1037	05/16/00
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COMMENTS:	

LOW CONC. WATER SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: SVOB720 Date Extracted: 05/09/00

Lab File ID: H1038 Date Analyzed: 05/16/00

Instrument ID: H-HP5973 Time Analyzed: 1917

## THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND LCS:

	I			····
	EPA	LAB	LAB	DATE
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
	=========	_==========	=======================================	========
01	SLCS76	SVOL608	H1039	05/16/00
02	E00F5	6066.001	H1040	05/16/00
03	ECFN2	6066.003	H1041	05/16/00
04	ECFN3	6066.004	H1042	05/16/00
05	ECFN4	6066.005	H1043	05/16/00
06	ECFN5	6066.006	H1044	05/16/00
07	ECFN6	6066.007	H1047	05/17/00
08	ECFN8	6066.008	H1048	05/17/00
09	E01TP	6066.010	H1049	05/17/00
10	E01TQ	6066.011	H1050	05/17/00
11	ECFP1	6066.012	H1051	05/17/00
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COMMENTS:				
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#### 1LCB

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SBLK44

Lab Name: PDP ANALYTICAL SERVICES Confract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: SVOB717

Date Received:

Lab File ID: H1030

Date Extracted: 05/05/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL)

Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION CAS NO. COMPOUND (ug/L) 108-95-2-----Phenol 5 U 111-44-4-----bis(2-Chloroethyl)ether 5 U 95-57-8-----2-Chlorophenol 5 | U 95-48-7-----2-Methylphenol 5 | U 108-60-1----2,2'-oxybis(1-Chloropropane) 5 | U 5 \ U 106-44-5-----4-Methylphenol 5 | U 621-64-7----N-Nitroso-di-n-propylamine 5 | U 67-72-1-----Hexachloroethane 5 ¦ U 98-95-3-----Nitrobenzene 5 **|** U 78-59-1------Isophorone 88-75-5----2-Nitrophenol 5 U 5 \ U 105-67-9-----2,4-Dimethylphenol 5 | U 111-91-1-----bis(2-Chloroethoxy)methane 5 U 120-83-2-----2,4-Dichlorophenol 91-20-3-----Naphthalene 5 | U 106-47-8-----4-Chloroaniline 5 | U 87-68-3-----Hexachlorobutadiene\_ 5 | U 5 | U 59-50-7-----4-Chloro-3-methylphenol 91-57-6----2-Methylnaphthalene 5 U 77-47-4-----Hexachlorocyclopentadiene 5 | U 88-06-2-----2,4,6-Trichlorophenol 5 U 95-95-4----2,4,5-Trichlorophenol 20 U 91-58-7----2-Chloronaphthalane 5 U 88-74-4----2-Nitroaniline 20 U 131-11-3-----Dimethylphthalate\_ 5 | U 208-96-8-----Acenaphthylene 5 | U 606-20-2-----2,6-Dintrotoluene 5 | U | 99-09-2----3-Nitroaniline 20 U 83-32-9-----Acenaphthene 5 U

#### 1LCC

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SBLK44

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: SVOB717 Date Received:

Lab File ID: H1030 Date Extracted: 05/05/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

S1-28-52,4-Dinitrophenol	CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
, === =	100-02-7	-4-Nitrophenol -Dibenzofuran -2,4-Dinitrotoluene -Diethylphthalate -4-Chlorophenyl-phenylether -Fluorene -4-Nitroaniline -4,6-Dinitro-2-methylphenol -N-Nitrosodiphenylamine (1) -4-Bromophenyl-phenylether -Hexachlorobenzene -Pentachlorophenol -Phenanthrene -Anthracene -Di-n-butylphthalate -Fluoranthene -Pyrene -Butylbenzylphthalate -3,3'-Dichlorobenzidine -Benzo(a) anthracene -Chrysene -bis(2-Ethylhexyl)phthalate -Benzo(b) fluoranthene -Benzo(a) pyrene -Benzo(a) pyrene -Indeno(1,2,3-cd) Pyrene -Dibenz(a,h) anthracene	20 5 5 5 5 5 20 20 5 5 5 5 5 5 5 5 5 5 5	ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם ם

(1) - Cannot be separated from Diphenylamine

1LCF

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

1	SBLK44	
fract, 68-D7-0004	!	

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: SVOB717

Date Received: \_\_\_\_

Lab File ID: H1030

Date Extracted: 05/05/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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#### 1LCB

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SBLK47

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: SVOB720 Date Received:

Lab File ID: H1038 Date Extracted: 05/09/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
108-95-2 111-44-4 95-57-8 95-48-7 108-60-1 106-44-5 621-64-7 67-72-1 98-95-3 78-59-1		5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	U U U U
111-91-1 120-83-2 91-20-3 106-47-8	bis(2-Chloroethoxy)methane	5 5 5	U   U   U   U
59-50-7 91-57-6 77-47-4	Hexachlorobutadiene4-Chloro-3-methylphenol2-MethylnaphthaleneHexachlorocyclopentadiene2,4,6-Trichlorophenol	5 5 5 5	U
95-95-4 91-58-7 88-74-4 131-11-3	2,4,5-Trichlorophenol2-Chloronaphthalane2-NitroanilineDimethylphthalate	20 5 20	U U
606-20-2   99-09-2	Acenaphthylene 2,6-Dintrotoluene 3-Nitroaniline Acenaphthene	5 20	U U U U

1LCC

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SBLK47

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: E00FL

Lab Sample ID: SVOB720 Date Received: \_\_\_\_

Lab File ID: H1038 Date Extracted: 05/09/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

		CONCENTRATION (ug/L)	
CAS NO.	CAS NO. COMPOUND		Q
51-28-5	2,4-Dinitrophenol	20	111
	4-Nitrophenol		: - :
	Dibenzofuran		lu l
	2,4-Dinitrotoluene		Ü
	Diethylphthalate		Ū
	4-Chlorophenyl-phenylether_		Ū
	Fluorene	· ·	Ū
	4-Nitroaniline	20	: :
	4,6-Dinitro-2-methylphenol_		: - :
	N-Nitrosodiphenylamine (1)		Ū
	4-Bromophenyl-phenylether	i .	ÌŪ Ì
	Hexachlorobenzene	5	U
	Pentachlorophenol	20	Ū
	Phenanthrene	5	iu i
120-12-7	Anthracene	5	U i
84-74-2	Di-n-butylphthalate	5	ן ט
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene		U
85-68-7	Butylbenzylphthalate	5	U
	3,3'-Dichlorobenzidine	5	U
	Benzo(a)anthracene	5	U
	Chrysene	•	U
	bis(2-Ethylhexyl)phthalate		lU
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b)fluoranthene	5	U
	Benzo(k)fluoranthene	5	U
	Benzo(a)pyrene		ן ט
193-39-5	Indeno(1,2,3-cd)Pyrene	5	U
53-70-3	Dibenz(a,h)anthracene	5	ן ט
191-24-2	Benzo(g,h,i)perylene	5	U
		i	l

(1) - Cannot be separated from Diphenylamine

#### 1LCF

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

### TENTATIVELY IDENTIFIED COMPOUNDS

SBLK47
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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: E00FL

Lab Sample ID: SVOB720

Date Received: \_\_\_\_\_

Lab File ID: H1038

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

E00F4

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.008

Date Received: 05/03/00

Lab File ID: H1037

Date Extracted: 05/05/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO. COMPOUND		CONCENTRATION (ug/L)	Q	
108-95-2	Phenol	5	U	
111-44-4	bis(2-Chloroethyl)ether	•	Ιυ i	
95-57-8	2-Chlorophenol	5	Ū	
95-48-7	2-Methylphenol	5	ט ו	
	2,2'-oxybis(1-Chloropropane)	5	U I	
	4-Methylphenol	5	U	
	N-Nitroso-di-n-propylamine	5	ט	
67-72-1	Hexachloroethane	5	U	
98-95-3	Nitrobenzene	5	U	
78-59-1	Isophorone	5	U	
	2-Nitrophenol	5	ן ט	
105-67-9	2,4-Dimethylphenol	5	U	
111-91-1	bis(2-Chloroethoxy) methane	5	ן טן	
120-83-2	2,4-Dichlorophenol	5	U	
91-20-3	Naphthalene	1 5	ן ט	
	4-Chloroaniline	5	U	
	Hexachlorobutadiene	5	U	
59-50-7	4-Chloro-3-methylphenol	•	U	
91-57-6	2-Methylnaphthalene	5	U	
77-47-4	Hexachlorocyclopentadiene		U	
88-06-2	2,4,6-Trichlorophenol	5	U	
95-95-4	2,4,5-Trichlorophenol	20		
91-58-7	2-Chloronaphthalane	5	U	
	2-Nitroaniline	20	U	
131-11-3	Dimethylphthalate	5	U	
208-96-8	Acenaphthylene	5	U	
606-20-2	2,6-Dintrotoluene	•	U	
99-09-2	3-Nitroaniline	20	: :	
83-32-9	Acenaphthene	5	U	
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

E00F4

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.008 Date Received: 05/03/00

Lab File ID: H1037 Date Extracted: 05/05/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

(uL)

CAS NO. COMPOUND		CONCENTRATION (ug/L)	Q
100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 120-12-7 84-74-2 129-00-0 85-68-7 129-00-0 129-00-0 129-00-0 129-00-0 117-81-7 117-84-0 205-99-2 207-08-9 193-39-5	4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluoranthenePyreneButylbenzylphthalate3,3'-DichlorobenzidineBenzo(a)anthracene	20 20 5 5 3 5 5 20 20 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט
191-24-2 	Benzo(g,h,i)perylene	5	U

(1) - Cannot be separated from Diphenylamine

1LCB

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

E00F5

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: 6066.001

Date Received: 05/05/00

Lab File ID: H1040

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION CAS NO. COMPOUND (ug/L) Q

	3,	_
108-95-2Phenol	5	U
111-44-4bis(2-Chloroethyl)ether		Ū
95-57-82-Chlorophenol		Ü
95-48-72-Methylphenol	5	ĺΰ
108-60-12,2'-oxybis(1-Chloropropane)	_	Ü
106-44-54-Methylphenol	_	Ū
621-64-7N-Nitroso-di-n-propylamine		บ
67-72-1Hexachloroethane	-	บ
98-95-3Nitrobenzene	_	Ü
78-59-1Isophorone	_	Ü
88-75-52-Nitrophenol	=	บ
105-67-92,4-Dimethylphenol		Ū
111-91-1bis (2-Chloroethoxy) methane	_	Ū
120-83-22,4-Dichlorophenol		บ
91-20-3Naphthalene	_	U
106-47-84-Chloroaniline	-	บ
87-68-3Hexachlorobutadiene	=	U
59-50-74-Chloro-3-methylphenol	=	บั
91-57-62-Methylnaphthalene	-	Ū
77-47-4Hexachlorocyclopentadiene	=	Ū
88-06-22,4,6-Trichlorophenol	=	บ
95-95-42,4,5-Trichlorophenol	20	! "
91-58-72-Chloronaphthalane		Ū
88-74-42-Nitroaniline	20	
131-11-3Dimethylphthalate		บ
208-96-8Acenaphthylene		บ
606-20-22,6-Dintrotoluene	_	Ü
99-09-23-Nitroaniline	20	: -
83-32-9Acenaphthene		U
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### DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

#### **INDIANAPOLIS**

### **OFFICE MEMORANDUM**

Date: March 26, 2002

To: Jessica Fliss

Federal Programs Section

Thru: Wilfred Michira

Steve Buckel

From:

Sandra Roberts

**OLQ Chemistry Section** 

Subject: Analytical Results for Himco Dump

Elkhart County, Elkhart, Indiana

Site # 7500044

Sampled: November 15 and 16, 2000

Tested by Region 5 Central Regional Laboratories in Chicago, Illinois

The analytical data and results from Himco Dump groundwater wells and residential wells have been validated according to the quality criteria contained in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, Third Edition, Final Updates 1, 2, 2a, and 3, and EPA Drinking Water Standards, 2002. Based on the evaluation, it has been determined that the results are acceptable for use. Reasons that data are qualified as estimated or unusable are explained below. This memorandum should remain attached to the original laboratory reports for reference.

#### General Comments:

The purpose of this event was to sample the groundwater wells at the Himco Dump and nearby residential wells. The collected samples were analyzed for metals (aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, lead, magnesium, manganese, mercury, nickel, iron, potassium, selenium, silver, sodium, thallium, vanadium, and zinc), volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, PCBs, and general chemistry parameters (cyanide, chloride, sulfate, and bromide).

### <u>Sampling Quality Assurance/Quality Control:</u>

Field documentation included only the chain-of-custody with the field locations in terms of monitoring well and residential water well identifications. Therefore, no site interpretation or evaluation can be made.

Field duplicate samples are used to establish the representativeness of field sampling (i.e., the homogeneity and sample variability). The sample results are considered in good agreement except the SVOC, di-n-butyl phthalate and therefore the di-n-butyl phthalate results are considered estimated.

Field blanks (trip and/or equipment) are used to identify sample contamination resulting from sampling equipment, sample containers, chemical preservatives, and the handling and transportation of samples. A trip blank sample was tested for VOCs only and the results showed no contamination except for 1 ppb of methylene chloride. The field blank or equipment blank showed chloride, sulfate, bromide, calcium, copper, iron, potassium, magnesium, sodium, vanadium, nickel, methylene chloride, chloroform, 1,2-dichloroethane, bromodichloromethane, di-n-butylphthalate, and bis(2-ethylhexyl)phthalate contamination and therefore, the detected results are considered estimated, biased high and possibly reflect cross-contamination.

### Laboratory Quality Assurance/Quality Control:

The laboratory performed all quality assurance/quality control (QA/QC) measures necessary to validate the analytical results for this sampling event. According to the Himco Supplemental Ground Water Investigation Field Sampling Plan/Quality Assurance Project Plan, the SW-846 methods were referenced for sample analysis. Based on the SW-846 quality assurance/control and CWA –NPDES SOP criteria, the data are considered acceptable for use.

Based on the validation of the analytical results, the following specific comments and/or qualifications are made regarding the data:

#### Metals Analysis

The water samples were tested for antimony, arsenic, cadmium, lead, selenium, and thallium by GFAA (Graphite Furnace Atomic Absorption) Method. The water samples were also tested for aluminum, barium, beryllium, calcium, chromium, cobalt, copper, iron, potassium, magnesium, manganese, silver, sodium, nickel, vanadium, and zinc by EPA Method 200.7 and mercury by EPA Method 245.2. The matrix spike duplicate sample testing was missing from the quality assurance / quality control information. To determine precision and possible matrix effects, matrix spike, matrix spike duplicate, and sample duplicate testing must be performed.

The 2001SK01S02, 2001SK01S03, and 2001SK01S04 arsenic results are considered estimated and biased slightly high due to continuing calibration verification (CCV) recovery of 111.7%. Note that 2001SK01S02 and 2001SK01S03 are reported diluted and reported as less than values yet above the detection limit.

The 2001SK01S03 lead results are considered estimated and biased slightly high due to continuing calibration verification (CCV) recovery of 110.9%.

The 2001SK01S01 through 2001SK01S04 and 2001SK01D02 thallium results are considered

Jessica Fliss-Himco Dump (Superfund) – March 26, 2002 Page 3 of 7

estimated and biased slightly high due to continuing calibration verification (CCV) recovery of 118.3%. Note that 2001SK01S01 through 2001SK01S04 and 2001SK01D02 are reported diluted and reported as less than values and above the detection limit.

The 2001SK01S01 through 2001SK01S04 and 2001SK01D02 beryllium results are considered estimated and biased high due to contamination from the laboratory preparation blanks.

The 2001SK01S01 and 2001SK01D02 sodium result is considered estimated and biased high due to contamination from the laboratory preparation blanks.

The vanadium and nickel detected results are considered estimated and biased high due to contamination from the laboratory preparation blanks.

### **General Chemistry**

The water samples were tested for cyanide by EPA Method 335.2, and chloride, bromide, and sulfate by EPA Method 300. The matrix spike duplicate sample testing was missing from the quality assurance / quality control information. To determine precision and possible matrix effects, matrix spike, matrix spike duplicate, and sample duplicate testing must be performed.

The 2001SK01S03 bromide result is considered estimated and possibly biased low due to upper calibration standard exceedance.

The 2001SK01S03 cyanide result is considered estimated and biased low since the pH was not adjusted before testing.

#### **Volatile Organic Compounds (VOCs)**

The water samples were tested for volatile organic compounds (VOCs) by a CLP method.

The 1,2 dichloroethane detected results are considered estimated and biased high due to out-of-control matrix spike duplicate recovery of 113%. Several other matrix spike duplicate recoveries are also out-of-control for trans-1,3-dichloropropene, 1,1,2-trichloroethane, 1,3-dichloropropane, dibromochloromethane, 1,2 dibromoethane, 1,2,3-trichloropropane and dibromomethane yet in these cases, the results are not considered qualified since the recoveries are biased high and the results are nondetect.

The napthalene's initial calibration verification and continuing calibration verification are out-of-control yet the results are not considered qualified since the recoveries are biased high and the results are nondetect.

The tentatively identified compound, chlorofluoromethane, results are estimated due to lack of instrument calibration.



Jessica Fliss-Himco Dump (Superfund) – March 26, 2002 Page 4 of 7

Note that all of the 2-chloroethyl vinyl ether results were rejected by the laboratory due to the laboratory's lack of calibration standard solutions.

#### Semivolatile Organic Compounds (SVOCs)

The water samples were tested for semivolatile organic compounds (SVOCs) by a CLP method.

The di-n-butyl phthalate results are estimated due to a low laboratory control sample recovery of 48%, low laboratory control sample recovery of 56%, and contamination of 4 ppb found in the laboratory preparation blank.

The bis(2-ethylhexyl)phthalate detected results are estimated due to contamination of 3 ppb found in the laboratory preparation blank.

The 2-chlorophenol results are considered estimated due to low matrix spike recovery of 50%, low matrix spike duplicate recovery of 42%, and laboratory control sample duplicate recovery of 80%.

The 3-nitroaniline's initial calibration verification and laboratory control sample recovery of 112% and laboratory control duplicate sample recovery of 132% are out-of-control yet the results are not considered qualified since the recoveries are high and the results are nondetect.

The pentachlorophenol's initial calibration verification, continuing calibration verification, laboratory control sample recovery of 156%, and laboratory control sample duplicate recovery of 184% are out-of-control yet the results are not considered qualified since the recoveries are high and the results are nondetect.

The benzoic acid's initial calibration verification, continuing calibration verification, laboratory control sample recovery of 180%, and laboratory control sample duplicate recovery of 204% are out-of-control yet the results are not considered qualified since the recoveries are high and the results are nondetect.

The hexachlorocyclopentadiene's initial calibration verification, continuing calibration verification, laboratory control sample recovery of 88%, and laboratory control duplicate sample recovery of 88% are out-of-control yet the results are not considered qualified since the recoveries are high and the results are nondetect.

The 3,3-dichlorobenzidine's continuing calibration verification and laboratory control duplicate sample of 112% are out-of-control yet the results are not considered qualified since the recoveries are high and the results are nondetect.

The 4-nitrophenol's continuing calibration verification, matrix spike recovery of 133%, and matrix spike duplicate recovery of 140%, and laboratory control sample recovery of 164% are out-of-control yet the results are not considered qualified since the recoveries are high and the

Jessica Fliss-Himco Dump (Superfund) – March 26, 2002 Page 5 of 7

results are nondetect.

The 2,4-dinitrophenol's initial calibration verification, continuing calibration verification, matrix spike recovery of 667%, laboratory control sample recovery of 640%, and laboratory control sample duplicate recovery of 840% are out-of-control yet the results are not considered qualified since the recoveries are high and the results are nondetect.

Laboratory control sample and laboratory control sample duplicate recoveries are out-of-control for 1,2-dichlorobenzene, benzyl alcohol, 4-methylphenol, bis(2-chloroisopropyl)ether, hexacloroethane, N-Nitro-di-n-propylamine, nitrobenzene, isophorone, 2,4-dimethylphenol, 2,4-dichlorophenol, 1,2,4-trichlorobenzene, 4-chloroaniline, hexachlorobutadiene, 4-chloro-3-methylphenol, 2-methylnaphthalene, 2,4,5-trichlorophenol, 2-aniline, dimethylphthalate, 4-chlorophenyl-phenylether, diethylphthalate, and butylbenzylphthalate yet the results were not considered qualified since the recoveries are high and the results are nondetect.

Laboratory control sample duplicate recoveries are out-of-control for phenol, 2-chlorophenol, 1.3-dichlorobenzene, 1,4-dichlorobenzene, 2-methylphenol, 2-nitrophenol, 2,4,6-trichlorophenol, 2-chlorophenol, 2-chlorophenol, 2-chlorophenol, 2-chlorophenol, 2-dinitrotoluene, acenaphthene, dibenzofuran, 2,4-dinitrotoluene, fluorene, 4,6-dintro-2-methylphenol, N-Nitrosodiphenylamine, 4-bromophenyl-phenylether, hexachlorobenzene, pyrene, and chrysene yet the results are not considered qualified since the recoveries are high and the results are nondetect.

The tentatively identified compound results are estimated due to lack of instrument calibration.

Even though the laboratory column was unable to separate the 4-methylphenol and 3-methylphenol compounds, the results are considered not qualified since all of the samples are nondetect.

#### Pesticides and PCBs

The water samples were tested for Pesticides and PCBs by a CLP method.

The PCB and pesticide results of samples 2001SK01S01, 2001SK01S03, 2001SK01S04 are considered estimated and biased low due to out-of-control surrogate recoveries.

The alpha-BHC, delta-BHC, gamma-chlordane, alpha-chlordane, p,p'-DDE, lindane, aldrin, endosulfan I, dieldrin, and endrin results are considered estimated and biased slightly low due to low recoveries of the quality control check samples.

The calibration verification is out-of-control for methoxychlor, aldrin, and p,p'-DDT yet in these cases, the results are not considered qualified since the recoveries are high and the results are nondetect.

The matrix spike and matrix spike duplicate recoveries are out-of-control for dieldrin and p,p'-

Jessica Fliss-Himco Dump (Superfund) – March 26, 2002 Page 6 of 7

DDT yet in these cases, the results are not considered qualified since the recoveries are high and the results are nondetect.

The laboratory control sample recoveries are out-of-control for BHC (Lindane), dieldrin, endrin, and p,p'-DDT yet in these cases, the results are not considered qualified since the recoveries are high and the results are nondetect.

#### Results:

Multiple samples exceeded the Drinking Water Standard Secondary Maximum Contaminant Levels (SMCLs) and Maximum Contaminant Levels (MCLs).

The attached charts list the data, except the pesticides and PCBs, that are qualified and/or exceed the MCLs, and SMCLs. All of the pesticides and PCB results are nondetect and all of the results are considered estimated except the beta-BHC, heptachlor, aldrin, hept epoxide, p,p'-DDT, endrin aldehyde, endosulfan sulfate, methoxychlor, endrin ketone, and aroclor 1242 for samples 2001SK01R01 (equipment blank) and 2001SK01S02 (2<sup>nd</sup> Residential Well).

Two MCLs were exceeded. Benzene concentration exceeded the 5 ppb MCL with 8 ppb of benzene for 2001SK01S03 (MW116A) and 1,2-dichloropropane exceeded the 5ppb MCL with 8 ppb of 1,2-dichloropropane for 2001SK01S02 (2<sup>nd</sup> Residential Well).

Several SMCLs were also exceeded. Total aluminum concentrations exceeded the 50-200 ppb SMCL with 58.2 ppb for 2001SK01S02 (2<sup>nd</sup> Residential Well), 335 ppb for 2001SK01S03 (MW116A), and 112 ppb for 2001SK01S04 (101A). Total iron concentrations exceeded the 300 ppb SMCL with 1840 ppb for 2001SK01S02 (2<sup>nd</sup> Residential Well), 8200 ppb for 2001SK01S03 (MW116A), and 9490 ppb for 2001SK01S04 (101A). Total manganese concentrations exceeded the 50 ppb SMCL with 103 ppb for 2001SK01S01 (1<sup>st</sup> Residential Well), 1250 ppb for 2001SK01S02 (2<sup>nd</sup> Residential Well), 1240 ppb for 2001SK01S03 (MW116A), and 929 ppb for 2001SK01S04 (101A). Sulfate concentration exceeded the 250 ppb SMCL with 1020 ppb for 2001SK01S03 (MW116A).

The VOC, chlorofluoromethane, was detected as a tentatively identified compound (TIC) at 4 ppb for 2001SK01S03 (MW116A) and 4 ppb for 2001SK01S04 (101A). Also, several SVOCs were detected as tentatively identified compounds and unknown compounds with the total concentrations of 235 ppb for the 2001SK01D02 (2<sup>nd</sup> Residential well duplicate), 25 ppb for 2001SK01S03 (MW116A) and 6 ppb for 2001SK01S04 (101A).

### **Conclusion**

For the overall project goal, the data are acceptable for use. Quarterly sampling and any ongoing remediation should continue to document when samples exceed the MCL, SMCL, and/or action levels. Also, field sheets and a sampling location map should be submitted with future results and the SW-846 methods and criteria listed in the Himco Supplemental Ground Water

Jessica Fliss–Himco Dump (Superfund) – March 26, 2002 Page 7 of 7

Investigation Field Sampling Plan/Quality Assurance Project Plan should be followed in the future.

Attachments

# NOT A REPORT - OLQ CI. ISTRY WORKSHL. ONLY - REFER T. ATTACHED MEMO

#### SITE AND SAMPLING INFORMATION

Site Name:

Himco Dump

Site Number:

7500044

Location: Date Sampled: Elkhart County, Elkhart, Indiana 11/15/00 and 11/16/00

Date Sampled:

Lab:

EPA Region 5 Central Regional Laboratories

Sample #	Type/ID#
Lab	
2001SK01R01	Field Method Blank*
2001SK01S01	1st Residential Well
2001SK01S02	2nd Residential Well
2001SK01D02	Duplicate of 2nd Residential Well**
2001SK01S03	MW116A
2001SK01S04	101A

### **Push Button to Print Page:**

RCRA Metals & Primary (Tasks A & B)

Metals Secondary (Task C)

General Chemical Analysis (Tasks D & E)

Volatile Organic Analysis (Task F)

Semi-volatile Organic Analysis (Task G)

PCBs/Pesticides (Task H)

TCLP Metals (Task M)

### NOT A REPORT - OLQ CHEMISTRY WORKSHEET ONLY - REFER TO ATTACHED MEMO

# **Total Metals**

pg 1 Water

Site Name: Himco Dump

Location:

Elkhart County, Elkhart, Indiana

Date Sampled: 11/15/00 and 11/16/00

Date Reported: 12/5/2000 and 12/6/2000 (mercury)

Lab: EPA Region 5 Central Regional Laboratories UNITS: ug/L

Sample #	Type/ID#	Ag	Al	Ba	Be	Ca	Cr	Со	Cu	Fe	Hg
Lab	Reporting limits >	1	40	2	0.3	44	3	1	2	11	0.5
	MCLs and Action levels >	100 (SMCL)	50-200 (SMCL)	2000	4	N/A	100	N/A	1300	300 (SMCL)	2
2001SK01R01	Field Method Blank*			<del></del>	<u> </u>	53.1		1	- 1.1 M	4.3 M	
2001SK01S01	1st Residential Well		35.9 M	48.1	0.2 M	102000			2.3	60.2	
2001SK01S02	2nd Residential Well		58.2	46.9	0.3 M	129000		0.8 M	1.0 M	1840	
2001SK01D02	Duplicate of 2nd Residential Well**		53.7	47.4	0.1 M	129000		0.9 M	1.4 M	1720	
2001SK01S03	MW116A		335	133	1.0	745000		1.1	2.1	8200	
2001SK01S04	101A		112	79.3	0.6	227000				9490	

<sup>\*</sup> BLANK (Type indicated)

Empty Box indicates NON-DETECTABLE

N/A = Not Applicable

Bold ≈ above action level

Estimated

\*\* FIELD DUPLICATE

NR = NOT RUN

M = result is above the method detection limit yet below the reporting limit.

# NOT A REPORT - OLQ CHE. .STRY WORKSHE. . ONLY - REFER. .) ATTACHED MEMO

# **Total Metals**

pg 2 water

Site Name:

Himco Dump

Location:

Elkhart County, Elkhart, Indiana

Date Sampled:

11/15/00 and 11/16/00

Date Reported:

12/5/2000

Lab: EPA Region 5

EPA Region 5 Central Regional Laboratories

UNITS: ug/L

Reporting Limit> MCLs and Action levels >	600	8	3	0.00			
MCI a and Action levels >		1 2 1	2	200	2	9	25
IVIOLS and Action levels >	N/A	N/A	50 (SMCL)	N/A	N/A	N/A	5000 (SMCL)
Field Method Blank*	219 M	<u></u> 15.1		212	.1.2 M	4.3 M	
1st Residential Well	2790	24800	103	53100	2.9	5.5 M	21.7 M
2nd Residential Well	§ 4400 <sub>4</sub>	14200	1250	42300	3.4	4.9 M	14.3 M
uplicate of 2nd Residential Well**	4670	14200	1250	42700	3.6	3.4 M	20.3 M
MW116A	30800	60000	1240	214000	4.2	⇒9,1	85.5
101A	10100	20200	929	36700	2.3	5.0 M	14.9 M
- - -	1st Residential Well 2nd Residential Well uplicate of 2nd Residential Well** MW116A	1st Residential Well 2nd Residential Well 4400 uplicate of 2nd Residential Well MW116A 30800	1st Residential Well       2790       24800         2nd Residential Well       4400       14200         uplicate of 2nd Residential Well**       4670       14200         MW116A       30800       60000	1st Residential Well       2790       24800       103         2nd Residential Well       4400       14200       1250         uplicate of 2nd Residential Well**       4670       14200       1250         MW116A       30800       60000       1240	1st Residential Well       2790       24800       103       53100         2nd Residential Well       4400       14200       1250       42300         uplicate of 2nd Residential Well**       4670       14200       1250       42700         MW116A       30800       60000       1240       214000	1st Residential Well       2790       24800       103       53100       2.9         2nd Residential Well       4400       14200       1250       42300       3.4         uplicate of 2nd Residential Well**       4670       14200       1250       42700       3.6         MW116A       30800       60000       1240       214000       4.2	1st Residential Well       2790       24800       103       53100       2.9       5.5 M         2nd Residential Well       4400       14200       1250       42300       3.4       4.9 M         uplicate of 2nd Residential Well**       4670       14200       1250       42700       3.6       3.4 M         MW116A       30800       60000       1240       214000       4.2       9.1

<sup>\*</sup> BLANK (Type indicated)

Empty Box indicates NON-DETECTABLE

\*\* FIELD DUPLICATE

NR = NOT RUN

N/A=Not Applicable

Estimated

**Bold = above action level** 

M = result is above the method detection limit yet below the reporting limit.

### NOT A REPORT - OLQ CHEMISTRY WORKSHEET ONLY - REFER TO ATTACHED MEMO

# **Total Metals**

pg 3

Site Name:

Himco Dump

Water

Location:

Elkhart County, Elkhart, Indiana

Date Sampled:

11/15/00 and 11/16/00

Date Reported:

12/15/00

Lab:

EPA Region 5 Central Regional Laboratories

UNITS: ug/L

Sample #	Type/ID#	As	Cd	Pb	Sb	Se	TI
Lab	Reporting Limit>	2	0.3	2	4	4	2
	MCLs and Action Levels >	50	5	15 (action level)	6	50	2
2001SK01R01	Field Method Blank*						
2001SK01S01	1st Residential Well						<4 D
2001SK01S02	2nd Residential Well	<4 D	<0.6 D		· · · · · · · · · · · · · · · · · · ·	<8 D	<6 D
2001SK01D02	Duplicate of 2nd Residential Well**		<0.6 D			<8 D	<4 D
2001SK01S03	MW116A	<10 D	<0.9 D	\$7 p. 10 2 10 2 10 10 10 10 10 10 10 10 10 10 10 10 10	<16 D	<40 D	<20 D
2001SK01S04	101A	6.4	<0.6 D		<8 D		<20 D

<sup>\*</sup> BLANK (Type indicated)

Empty Box indicates NON-DETECTABLE

Estimated

NR = NOT RUN

N/A = Not Applicable

Bold = above action level

D = Dilutions were necessary and the results are reported above the reporting limit.

<sup>\*\*</sup> FIELD DUPLICATE

# **General Chemical Analysis**

Site Name:

Himco Dump

Water

Location:

Elkhart County, Elkhart, Indiana

Date Sampled:

11/15/00 and 11/16/00

Date Reported:

1/16/01 and 12/5/00 (cyanide)

Lab:

EPA Region 5 Central Regional Laboratories

UNITS:

mg/L

Sample #	Type/ID#	Bromide	Chloride	Sulfate	Cyanide
Lab					
	Reporting Limit>	0.014	0.05	0.025	0.008
	MCLs and Action levels >	N/A	250 (SMCL)	250 (SMCL)	0.2
2001SK01R01	Field Method Blank*	[384] 1 5 5 1 0.04 1 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	96.5	79.3	
2001SK01S01	1st Residential Well				
2001SK01S02	2nd Residential Well		99.9	105	
2001SK01D02	Duplicate of 2nd Residential Well**	10.03	98.4	104	
2001SK01S03	MW116A	3.75 June 1980 (20)	26.0	1020	
2001SK01S04	101A	0.32	27.2	177	
					<del></del>

<sup>\*</sup> BLANK (Type indicated)
\*\* FIELD DUPLICATE

Empty Box indicates NON-DETECTABLE

NR = NOT RUN

N/A = Not Applicable

Estimated

Bold = above action level

#### NOT A REPORT - OLQ CHEMISTRY WORKSHEET ONLY - REFER TO ATTACHED MEMO

## **Volatile Organic Analysis**

Site Name:

Himco Dump

pg 1 Water

Location:

Elkhart County, Elkhart, Indiana

Date Sampled:

11/15/00 and 11/16/00

Date Reported:

12/14/2000

Lab:

EPA Region 5 Central Regional Laboratories

UNITS:

ug/L

Sample #	Type/ID#	Benzene	1,1-Dichloroethane	1,2-Dichloroethane	cis-1,2-Dichloroethene	Dichlorofluoromethane	1,2-Dichloropropane
Lab							
	Reporting Limit	1	1	1	1	1	1
	MCLs and Action Levels >		N/A	5	70	N/A	5
2001SK01R01	Field Method Blank*		<u> </u>	or or or or or or or or or or or or or o			
2001SK01S01	1st Residential Well				, <u>, , , , , , , , , , , , , , , , , , </u>		
2001SK01S02	2nd Residential Well		4	N-1391999	2	5	8
2001SK01D02	Duplicate of 2nd Residential Well**	<del></del>	4	1.日本14 <b>4</b> 1年中代。	3	6	8
2001SK01S03	MW116A	8	9		*	10	2
2001SK01S04	101A	2	14			6	
2001SK01R02	Trip Blank	····					

<sup>\*</sup> BLANK (Type indicated)
\*\* FIELD DUPLICATE

**Empty Box indicates NON-DETECTABLE** 

NR = NOT RUN N/A =

N/A = Not Applicable

Estimated

Bold = above action level



### **Semi-Volatile Organic Analysis**

Water

Site Name:

Himco Dump

Location:

Elkhart County, Elkhart, Indiana

Date Sampled:

11/15/00 and 11/16/00

Date Reported:

12/19/2000

Lab:

EPA Region 5 Central Regional Laboratories

UNITS:

ug/L

Type/ID#	Bis(2-ethylhexyl)phthalate	Di-n-butylphthalate	Hydroxybenzothiazole	Sum of TICs
				and unknown compounds
Reporting Limit	5	5	10	
MCLs and Action levels >	N/A	NA	NA	-
Field Method Blank*	**************************************	3 M		
1st Residential Well		4 M		
2nd Residential Well	CARLES MODE TO SE			
Duplicate of 2nd Residential Well**				235
MW116A		}~> (3:4 M →	23	25
101A			30	6
	Reporting Limit  MCLs and Action levels >  Field Method Blank*  1st Residential Well  2nd Residential Well  Duplicate of 2nd Residential Well**  MW116A	Reporting Limit 5  MCLs and Action levels > N/A  Field Method Blank* 3 M  1st Residential Well  2nd Residential Well  Duplicate of 2nd Residential Well**  MW116A	Reporting Limit 5 5  MCLs and Action levels > N/A NA  Field Method Blank* 3 M 3 M  1st Residential Well 4 M  2nd Residential Well  Duplicate of 2nd Residential Well** 3 M  MW116A 3 M 14	Reporting Limit         5         5         10           MCLs and Action levels >         N/A         NA         NA           Field Method Blank*         3 M         3 M           1st Residential Well         4 M           2nd Residential Well         3 M           Duplicate of 2nd Residential Well**         3 M           MW116A         4 M         23

<sup>\*</sup> BLANK (Type indicated)

\*\* FIELD DUPLICATE

NR = NOT RUN

Empty Box indicates NON-DETECTABLE NA = Not Applicable Estimated

Bold = above action level

TIC = Tentatively Identified Compound

M = result is above the method detection limit yet below the reporting limit.

#### NOT A REPORT - OLQ CHEMISTRY WORKSHEET ONLY - REFER TO ATTACHED MEMO

#### PCBs/Pesticides

Water

Site Name:

Himco Dump

Location:

Lab:

Elkhart County, Elkhart, Indiana

Date Sampled:

11/15/00 and 11/16/00

Date Reported:

1/29/01 EPA Region 5 Central Regional Laboratories

UNITS: ug/L

Sample #	Type/ID#	alpha-BHC	Lindane	beta-BHC	Heptachlor	delta-BHC	Aldrin	Hept Epoxide	gamma-Chlordane	alpha-Chlordane	Endosulfan
Lab		<b> </b>					-		-		
	Action Value >										
2001SK01R01	Field Method Blank*										
2001SK01S01	1st Residential Well										
2001SK01S02	2nd Residential Well										
2001SK01D02	Duplicate of 2nd Residential Well**										
2001SK01S03	MW116A										
2001SK01S04	101A										

<sup>\*</sup> BLANK (Type indicated)

\*\* FIELD DUPLICATE

Empty Box indicates NON-DETECTABLE

NR = NOT RUN

#### **PCBs/Pesticides**

Soil

Site Name:

Himco Dump

Location:

Elkhart County, Elkhart, Indiana

Date Sampled:

11/15/00 and 11/16/00

Date Reported: Lab:

EPA Region 5 Central Regional Laboratories UNITS: ug/kg

Sample #	Type/ID#	p,p'-DDE	Dieldrin	Endrin	p.p'-DDT	rin Aldeh	sulfan S	ethoxychi	Endrin ketone	Aroclor 1242	
Lab											
Action Value >											
2001SK01R01	Field Method Blank*				<u> </u>						<u>                                     </u>
2001SK01S01	1st Residential Well										
2001SK01S02	2nd Residential Well										i
2001SK01D02	Duplicate of 2nd Residential Well**				1						
2001SK01S03	MW116A										1
2001SK01S04	101A										
BLANK (Type ind	[cated)		Empty Box	indicates N	ION-DETEC	TARLE		I			<u> </u>

<sup>\*</sup> BLANK (Type indicated)

NR = NOT RUN

" FIELD DUPLICATE

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



#### REGION 5 CENTRAL REGIONAL LABORATORY

#### 536 SOUTH CLARK STREET

#### **CHICAGO, ILLINOIS 60605**

Date:	DEC 1 : 2000
Subject:	Review of Region 5 Data for Himco Landfill
From:	Nidia Fuentes , Chemist 414 Region 5 Central Regional Laboratory
To:	Gwen Massenburg SR-6J
	he results for Site: <u>Himco Landfill</u> Number: 2001 0009
for analyses of	f: VOA - waters
Results are rep	ported for sample numbers: 2001SK01S01, S02, D02, S03, S04,
R01, R02, S02	2MS and S02MSD.
Dogulta Status	
Results Status (X) Acceptab	
•	alified, but Acceptable for use
	acceptable for Use

Date Transmitted: 2017  Date Transmitted: 2017  Date Transmitted: 2017
Please have the US EPA project leader fill out the customer survey form on the Region 5 Intranet: http://www.r5intra.epa.gov/crl/qa.html <sub>2</sub> ( by clicking on this link, or call George Schupp, CRL Sample Coordinator, at 3-1226).

Please sign and date this form below and return it with any comments to:

Sylvia Griffin Data Management Coordinator Region 5 Central Regional Laboratory ML - 10C

Received by and Date

Comments:

20010009

50,020

## ENVIRONMENTAL PROTECTION AGENCY FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH SUP	SAMPLE	DATE 11/15-16/200	LAB ARRIVAL DAT	E 11/17/05	DUE DATE	12/18/00
DU NUMBER 501021)	DATA SET NUMBER 2000 STUDY	HIMCULAMITIC	PRIORITY	CONTRACTOR	λ'	

CHE LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/I. TOX 17664	WATER ABN ORIGANICS SCAN UG/I. TOX 17574	SEDIMENTS SOLIOS VOLATILE ORGANICS SCAN MG/KG (DRY) TOX 215622	SEDIMENTS SOLIDS ABN ORGANICS SCAN MG/KG (DRY) TOX 215722
ZUSISKUIRUI	5-056876-577-878  METICANSCIPAL  5-056873-574-875  TB: 17-11 BUPL  5-056854-860-861  15-12-15-15-16-16  5-056837-38-31-40-41-42-45  -2MP RUSISUL CARSTONIO  5-056831-8-32-8-35  DUILLUME OF SUZ	X			
2001 SKUTREZ	5-056873-874-875 1731 17211 Buthik	X			
26015×01501	5056854-866-361 15 RES WEY	X			
2001SKU1502	- 2m RUSLIUZ CARELMU	X			<u> </u>
20015KUD02	5-0568 1-8 32-8 33 DUPLICATE OF SOZ	Α			
200! SKUI SU 3	MW116 45-056516-17-18	X			
2001 SKUSOY	1014 5-056807-08-69	X	4		
2001SKUIRUI	Momen scime 5050		<u> </u>		
2001SKUISUI	15TROSWIL 5056804 547453-1-535-534 2511212 MS/MM				
2001SKUISUZ	3 KM 25 WELL MS/MAN				
	Dup-1470 0= 502	7.11	X		
	MW116A 5-056819				
2001 SKUISUY	1014 5-056812		N		
		<u> </u>		A STATE OF THE STA	
,					

#### CASE NARRATIVE

DATE: December 14, 2000

PROJECT NAME: Himco Landfill - CRL Case #:20010009

Analysis of Volatile Organic Analytes (VOA)

ANALYST: Nidia Fuentes, Chemist M+

REVIEWER: Babu Paruchuri, GC/MS Team Leader

#### I. CASE DESCRIPTION:

The laboratory received seven low water samples (2001SK01S01, SO2, SO3, SO4, RO1, RO2 and DO2) for volatile organic analyte (VOA) analysis which were already acid preserved in the mield. These samples were analyzed on 11/22-23/2000 by the CRL Method GCMS023, on instrument #7. In addition to the routine parameters, the lab analyzed the site samples for the following additional site specific compounds: ethyl ether, dichlorofluoromethane, and chlorofluoromethane. Because the latter compound was not readily available at the time of sample analysis, the lab reported estimated concentrations for chlorofluoromethane. The laboratory met sample analysis holding time criteria for all samples. (QC Criteria for water acid preserved sample analysis holding time: 14 the date of collection.) These samples were received at the laboratory in good condition.

#### II. INSTRUMENT QUALITY CONTROLS:

- 1. <u>Instrument Performance Check:</u> On each day of analysis, the GC/MS instrument (HP-MSD#7) performance checks were made to determine whether the instrument met the EPA tuning criteria for p-BFB (QC Criteria: Same as the CWA's criteria). No problems were observed.
- 2. Initial Calibration Check: An acceptable five point initial calibration (IC) curve (QC Criteria for IC: %RSD should be  $\leq$  35%) is required for all target compounds before samples can be analyzed. The lab generated one IC curve on

- 11/21/2000, having no outliers except naphthalene and 2-chloroethyl vinyl ether. Because the latter compound was not detected in the calibration standards, 2-chloroethyl vinyl ether data were qualified as unusable "R". Also, since naphthalene not was detected in the site samples, its reporting limits were flagged estimated (UJ).
- 3.Continuing Calibration Check: Two continuing calibrations check (CCC) standards were evaluated to analyze the site samples. The first CCC data generated on 11/22/2000 met the CRL QC requirements for all compounds (QC Criteria for CC: %D should be ≤ 30%) except for naphthalene and 2-chloroethyl vinyl ether. The following samples were analyzed by this calibration: 2001SK01S01, S02, D02, S03, S04, R01 and R02. The second CCC generated on 11/24/2000 had two outliers: naphthalene and 2-chloroethyl vinyl ether. The following Samples were analyzed by this CC: 2001SK01S02dil, D02dil, S03dil, S04dil, S02MSdil and S02MSDdil.
- 4. Internal Standard (IS) Area and Retention Time (RT) Summary: The lab generated data of acceptable quality.

#### III. METHOD QUALITY CONTROL:

- 1. <u>Method Blank Results:</u> On each day of sample analysis, 25-ml of reagent water spiked with internal standards and surrogates was analyzed to check the GC/MS and purge and trap systems for lab contamination. No problems were encountered.
- 2. <u>Surrogate Spike Compound Results:</u> The surrogate spike compound recovery data were within the CRL's QC limits for all of the site samples.
- 3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results: The laboratory collected site-specific matrix precision and accuracy (P&A) data using the site sample 2001SK01S02. Because the lab has not yet analyzed enough MS and MSD samples to establish QC acceptance criteria, the lab evaluated the MS and MSD sample QC data quality based on QC acceptance criteria established for LCS and LCS duplicates. Please see below.

- 4. <u>Laboratory Control Sample (LCS):</u> The laboratory analyzed LCS and LCS duplicates and generated data of acceptable quality for the target compounds.
- 5. <u>Performance Evaluation Sample (PES):</u> Not applicable. QC Criteria for the PES: Control Limits are established by EMSL-LV.

#### IV. SAMPLE RESULTS:

The laboratory generated data of acceptable quality. Some of the field samples, S02, D02, S03 and S04, were diluted and reanalyzed at proper dilutions. The affected compound (ethyl ether and dichlorofluoromethane) data were qualified "D". Chlorofluoromethane result should be considered as an estimated value.

## TCRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
В	This flag is used when the analyte is found in the associated <u>B</u> lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
D	This flag is used when the analyte concentration results from a required $\underline{D}$ ilution of the sample, extract or digestate.
E	This flag is used to identify analyte concentrations <u>Exceeding</u> the upper calibration range of the analytical instrument after dilution of the sample, extract or digestate.  The reported value is considered to be estimated
J	This flag is used when the analyte is <u>estimated</u> due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. ( <u>J</u> is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
M	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL <u>Method Detection Limit (MDL)</u> but below the CRL reporting limit (RL). This flag applies to all values in this concentration range and indicates the quantitated value is <u>estimated</u> due to its presence in this concentration range.
N	This flag applies to GC/MS Te <u>N</u> tatively Identified Compounds (TICs) that have a mass spectral library match.
Q	This flag applies to analyte data that are severely estimated due to quality control and/or <i>Q</i> uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.
R	This flag applies to analyte data that are <b>R</b> ejected and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. No value is reported with this qualification flag.
U	This flag in used when the analyte was analyzed but <u>Undetected</u> in the sample. The CRL RL for the analyte accompanies this flag. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

EPA SAMPLE NO.

LAB BLANK

Lab Name: HIMCO LANDFILL Contract: CRL Lab Code: 5-CRL Case No.: 20010009 SAS No.: SDG No.: GCMS022 Lab Sample ID: LAB BLANK Matrix: (soil/water) WATER (g/ml) ML Lab File ID: 7C112210.D Sample wt/vol: 25.0 LOW Level: (low/med) Date Received: 11/17/00 Date Analyzed: 11/22/00 % Moisture: not dec. Dilution Factor: 1.0 GC Column: DB-624 ID: 0.53 (mm)

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

#### CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug.	/Kg) <u>UG/L</u>		Q
75-01-4	Vinyl chloride		1	U
74-87-3	Chloromethane		1	U
74-83-9	Bromomethane		1	U
75-00 <b>-</b> 3	Chloroethane		1	U
107-64-1	Acrolein		10	U
75-35-4	1,1-Dichloroethene		1	U
115-10-6	Ethyl ether		1	U
75-71-8	Dichlorofluoromethane		1	U
67-64-1	Acetone	- · ·	10	_U
75-15-0	Carbon disulfide		1	U
75-09-2	Methylene chloride			U
107-13-1	Acrylonitrile		10	U
156-60-5	trans-1,2-Dichloroethene		1	U
75-34-3	1,1-Dichloroethane		11	U
78-93-3	2-Butanone		10	U
156-59-2	cis-1,2-Dichloroethene		1 _	U
594-20-7	2,2-Dichloropropane	, -	2	U
74-97- <u>5</u>	Bromochloromethane		1	U
67-66-3	Chloroform		1	U
71-55 <u>-6</u>	1,1,1-Trichloroethane		1	U
563-5 <b>8-6</b>	1,1-Dichloropropene		1 .	.U
56-23-5	Carbon tetrachloride		1	<u>U</u>
107-06-2	1,2-Dichloroethane	-	1	<u>U</u>
71-43-2	Benzene		1	_ U
79-01-6	Trichloroethene		1	<u>U</u>
78-87-5	1,2-Dichloropropane		_ 1	Ų Į
75-27-4	Bromodichloromethane		1	U
10061-01-5	cis-1,3-Dichloropropene		1 .	U
108-10-1	4-Methyl-2-pentanone		5	U
108-88-3	Toluene		1	U
10061-02-6	trans-1,3-Dichloropropene		2	U
110-75-8	2-Chloroethyl vinyl ether		5	<u>1</u> 1 √ .
79-00-5	1,1,2-Trichloroethane		_1	<u>U</u>
142-28-9	1,3-Dichloropropane		1	<u> </u>
127- <b>18-</b> 4	Tetrachloroethene		1	U
591-78-6	2-Hexanone		2	_ U
124-48-1	Dibromochloromethane		1	U
106-93-4	1,2-Dibromoethane		1	U ?
108-90-7	Chlorobenzene		1	U

\*1/102/16

EPA SAMPLE NO.

I ab Name		LANDELL	Contract: CDI		LAE	BLAN	ĸ
Lab Name:		LANDFILL	Contract: CRL	L		<del></del>	
Lab Code:	5-CRL	Case No.: 2001	0009 SAS No.:	SDG	i.oN £	GCMS	)22
Matrix: (soil/	water)	WATER	Lab Samp	le ID: L	AB BLA	ANK	
Sample wt/v	ol:	25.0 (g/ml) ML	Lab File IC	): 70	C1122	10.D	
Level: (low/r	med)	LOW	Date Rece	ived: 1	1/17/00	)	
% Moisture:	not dec.		Date Analy	/zed: 11	1/22/00	)	
GC Column:	DB-62	4 ID: 0.53 (mm)	Dilution Fa	ctor: 1.	0		
Soil Extract \	/olume:	(uL)	Soil Aliquo	t Volume	·—··		(uL)
			CONCENTRATION UN	HTS:			
CAS NO	).	COMPOUND	(ug/L or ug/Kg) UG	ì/L		Q	
630-20	)-6	1,1,1,2-Tetrachloro	ethane		1	U	
100-41	-4	Ethylbenzene			1	U	
10838	36423	m- &/or p-Xylene			1	U	
95-47-	6	o-Xylene			1	U	
100-42		Styrene			1	U_	
75-25-	2	Bromoform			1	U_	
98 <u>-82</u> -	~	Isopropylbenzene			1	U	
79-34-		1,1,2,2-Tetrachloroe			1	U	
96-18-		1,2,3-Trichloropropa	ane		1	U	
108-86		Bromobenzene			1	U	
103-65		n-Propylbenzene				<u> </u>	
95-49-		2-Chlorotoluene				<u> </u>	
106-43		4-Chlorotoluene				U	
108-67		1,3,5-Trimethylbenz	rene		1	U U	_
98-06- 95-63-		tert-Butylbenzene 1,2,4-Trimethylbenz	'ODO		<u> </u>	Ü	
135-98		sec-Butylbenzene	.e.i.e			U	<del></del>
99-87-		p-Isopropyltoluene			<u>'</u>	U	
541-73		1,3-Dichlorobenzen	Δ		! 1	- <u>U</u>	
106-46		1,4-Dichlorobenzen			1	U	
104-51		n-Butylbenzene	·		- <u></u>	Ū	
95-50-		1.2-Dichlorobenzen	e		- <del>-</del>	Ü	
96-12-		1,2-Dibromo-3-chlo			· 1	U	-
120-82		1,2,4-Trichlorobenz			<u>i</u>		
87-68-		Hexachlorobutadier			<u>-</u>	U	
01 20		Nonthalana	i7				=-

Hexachlorobutadiene Naphthalene

1,2,3-Trichlorobenzene

87-68-3 91-20-3

87-61-6

#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

LAB BLANK

Lab Name:	HIMCO	LANDFIL	<u>L</u>		Contra	ct: C	HL	<u> </u>		
Lab Code:	5-CRL		Case No.:	20010009	SAS	No.:		SDG No.:	GCM	S022
Matrix: (soil/v	vater)	WATER				Lab S	Sample ID	: LAB BL	ANK	
Sample wt/vo	ol:	25.0	(g/ml)	ML		Lab F	ile ID:	7C1122	10.D	
Level: (low/n	ned)	LOW				Date	Received	l: <u>11/17/0</u>	0	_
% Moisture: r	not dec.		***			Date .	Analyzed	: 11/22/00	0	
GC Column:	DB-62	4 ID: (	0.53 (m	m)		Dilutio	on Factor	: 1.0		-
Soil Extract V	olume:		(uL)			Soil A	liquot Vo	lume:		(uL)
Number TICs	found:	0	<del></del> -		_		N UNITS UG/L	:		
CAS NO.		COMPO	UND NAI	ΛF		F	RT F	ST CONC		Q

EPA SAMPLE NO.

LAB BLANK

Lab Name: HIMCO LANDFILL Contract: CRL Lab Code: 5-CRL Case No.: 20010009 SAS No.: SDG No.: GCMS022 WATER Lab Sample ID: LAB BLANK Matrix: (soil/water) Sample wt/vol: 25.0 (g/ml) ML Lab File ID: 7C112404.D Date Received: 11/17/00 Level: (low/med) LOW Date Analyzed: 11/24/00 % Moisture: not dec. Dilution Factor: 1.0 GC Column: DB-624 ID: 0.53 (mm) Soil Aliquot Volume: Soil Extract Volume: (uL) (uL)

#### CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg) UG/L		Q
75-01-4	Vinyl chloride	_ 1	U
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
107-64-1	Acrolein	10	U
75-35-4	1,1-Dichloroethene	1	U
115-10-6	Ethyl ether	1	U
75-71-8	Dichlorofluoromethane	1	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	1	U
75-09-2	Methylene chloride	1	U .
107-13-1	Acrylonitrile	10	<u> </u>
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	<u> </u>
78-93-3	2-Butanone	10	UU
156-59-2	cis-1,2-Dichloroethene	1	<u>U</u>
594-20-7	2,2-Dichloropropane	2	U
74-97-5	Bromochloromethane	1	_ U
67-66-3	Chloroform	.1	U
71-55-6	1,1,1-Trichloroethane	1	<u>U</u>
563-58-6	1,1-Dichloropropene	1	<u>U</u>
56-23 5	Carbon tetrachloride	_1	<u>U</u>
107-06-2	1,2-Dichloroethane	1	U
71-43-2	Benzene	1	<u>U</u>
79-01-6	Trichloroethene	1	U
78-87-5	1,2-Dichloropropane	11	U
75-27-4	Bromodichloromethane	1	U(
10061-01-5	cis-1,3-Dichloropropene	. 1	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	1	U_
10061-02-6	trans-1,3-Dichloropropene	2	U
110-75-8	2-Chloroethyl vinyl ether	<u> </u>	⊌ ₹
79-00-5	1,1,2-Trichloroethane	1	U
142-28-9	1,3-Dichloropropane	1	_U
127-18-4	Tetrachloroethene	1	UU
591-78-6	2-Hexanone	2_	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane	1	U
108-90-7	Chlorobenzene	1	U

7-170

EPA SAMPLE NO.

LAB BLANK

Lab Name:	HIMCO	LANDFI	LL,	Contract: CRL	
Lab Code:	5-CRL		Case No.: 20010009	SAS No.:	SDG No.: GCMS022
Matrix: (soil/v	water)	WATER	3	Lab Sample ID	: LAB BLANK
Sample wt/vo	ol:	25.0	(g/ml) ML	Lab File ID:	7C112404.D
Level: (low/r	ned)	LOW		Date Received	: 11/17/00
% Moisture: i	not dec.			Date Analyzed	11/24/00
GC Column:	DB-62	24 ID:	0.53 (mm)	Dilution Factor:	1.0
Soil Extract V	/olume:		(uL)	Soil Aliquot Vol	lume: (ul

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L		Q
630-20-6	1,1,1,2-Tetrachlor	nothano		1	U
100-41-4	Ethylbenzene	Detriane		1	<u>U</u>
1083836423	m- &/or p-Xylene			1	<u>U</u>
95-47-6	o-Xylene			1	U
100-42-5	Styrene	······································	··	<u>'</u>	U -
75-25-2	Bromoform			1	U
98-82-8	Isopropylbenzene	<del></del>		1	U U
79-34-5	1,1,2,2-Tetrachlor	nethane	- · · —	1	<del>Ŭ</del>
96-18-4	1,2,3-Trichloroprop			1	U
108-86-1	Bromobenzene			1	U
103-65-1	n-Propylbenzene			1	Ū
95-49-8	2-Chlorotoluene			1	U
106-43-4	4-Chlorotoluene			1	U
108-67-8	1,3,5-Trimethylben	zene		1	U
98-06-6	tert-Butylbenzene			1	U
95-63-6	1,2,4-Trimethylben	zene		1	U
135-98-8	sec-Butylbenzene			1	U
99-87-6	p-Isopropyltoluene	_		1	U
541-73-1	1,3-Dichlorobenzei	ne		1	U
106-46-7	1,4-Dichlorobenzei	ne		. 1	<u>U</u>
104-51-8	n-Butylbenzene			1	UΣ
95-50-1	1,2-Dichlorobenzer	ne _	=	_ 1	U
96-12-8	1,2-Dibromo-3-chlo	propropane		1	U
120-82-1	1,2,4-Trichloroben:	zene		1 .	<u>U</u>
87-68-3	Hexachlorobutadie	ne		1_	<u> </u>
91-20-3	Naphthalene			. 1	<u>U</u> <u>J</u>
87-61-6	1,2,3-Trichloroben	zene		1	U

#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO. TENTATIVELY IDENTIFIED COMPOUNDS

									1 1 1	BBLA	NK
Lab Name:	HIMCO	LANDFIL	<u> L</u>	Co	ontrac	et:	CRL		LA	- DLA	1111
	5-CRL		Case No.: 200		SAS	No.	•	SD	G No.:	GCM	S022
Matrix: (soil/v	vater)	WATER			:	Lab	Sample ID	): <u>L</u>	AB BL	ANK	
Sample wt/vo	of:	25.0	(g/mi) ML			Lab	File ID:	7	C1124	04.D	_
Level: (low/n	ned)	LOW	· 4			Date	e Received	t: <u>1</u>	1/17/00	)	
% Moisture: r	not dec.		tion and the same of the same of		i	Date	e Analyzed	: 1	1/24/00	)	
GC Column:	DB-62	4 ID:	0.53 (mm)		į	Dilu	tion Factor	: 1	.0		
Soil Extract V	'olume:		(uL)				Aliquot Vo				_ (uL
Number TICs	found:	0					ON UNITS		<del>-</del>		
CAS NO		COMPO	DUND NAME				RT F	ST	CONC	:	Ο

EPA SAMPLE NO.

**1ST RES WELL** 

Lab Name: HIMCO LANDFILL Contract: CRL Lab Code: 5-CRL Case No.: 20010009 SAS No.: SDG No.: GCMS022 Lab Sample ID: 2001SK01S01 Matrix: (soil/water) WATER (g/ml) ML\_\_\_ Lab File ID: 7C112211.D Sample wt/vol: 25.0 Date Received: 11/17/00 Level: (low/med) LOW % Moisture: not dec. Date Analyzed: 11/22/00 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Aliquot Volume: (uL) Soil Extract Volume: (uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L		Q
75-01-4	Vinyl chloride			1	Ú
74-87-3	Chloromethane			1	Ū
74-83-9	Bromomethane			1	U
75-00-3	Chloroethane			1	U
107-64-1	Acrolein			10	Ū
75-35-4	1,1-Dichloroethene			1	Ū
115-10-6	Ethyl ether			1	U
75-71-8	Dichlorofluorometha	ine		1	U
67-64-1	Acetone			10	U
75-15-0	Carbon disulfide			1	U
75-09-2	Methylene chloride			1	U
107-13-1	Acrylonitrile			10	U
156-60-5	trans-1,2-Dichloroet	hene		1	· U
75-34-3	1,1-Dichloroethane			1	U
78-93-3	2-Butanone			10	U
156-59-2	cis-1,2-Dichloroethe	ne _		11	U
594-20-7	2,2-Dichloropropane	9		2	U
74-97-5	Bromochloromethar	ne		1	U
67-66-3	Chloroform	-	,	1	Ú
71-55-6	1,1,1-Trichloroethan	e		1	<u> </u>
563-58-6	1,1-Dichloropropene	)		1	Ū
56-23-5	Carbon tetrachloride	9		1	Ü
107-06-2	1,2-Dichloroethane			_ 1	U
71-43-2	Benzene			1	U
79-01-6	Trichloroethene			_ 1	U
78-87-5	1,2-Dichloropropane	)		1	U
75-27-4	Bromodichloromethi	ane		1	U
10061-01-5	cis-1,3-Dichloroprop	ene	_	1	U
108-10-1	4-Methyl-2-pentanoi	ne		5	U
108-88-3	Toluene			1	U
10061-02-6	trans-1,3-Dichloropr	opene		2	U
110-75-8	2-Chloroethyl vinyl e	ether		<u>ş</u>	UR
79-00-5	1,1,2-Trichloroethan	е		1	U
142-28-9	1.3-Dichloropropane	)		1	U
127-18-4	Tetrachloroethene		-	1	U
591-78-6	2-Hexanone			2	U
124-48-1	Dibromochlorometh	ane		1	U
106-93-4	1,2-Dibromoethane			1	U
108-90-7	Chlorobenzene			1	U

EPA SAMPLE NO.

**1ST RES WELL** 

Lab Name: HIMCO LANDFILL Contract: CRL Lab Code: 5-CRL Case No.: 20010009 SAS No.: SDG No.: GCMS022 Matrix: (soil/water) WATER Lab Sample ID: 2001SK01S01 Sample wt/vol: Lab File ID: 7C112211.D 25.0 (g/ml) ML Level: (low/med) LOW Date Received: 11/17/00 % Moisture: not dec. Date Analyzed: 11/22/00 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Extract Volume: (uL) Soil Aliquot Volume: \_\_ (uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L		Q
630-20-6	1,1,1,2-Tetrachle	oroethane		1	U
100-41-4	Ethylbenzene	<u> </u>		1	U
1083836423	m- &/or p-Xylene	9		1	U
95-47-6	o-Xylene	<u> </u>		1	U
100-42-5	Styrene			1	U
75-25-2	Bromoform			1	U
98-82-8	Isopropylbenzen	ie		1	U
79-34-5	1,1,2,2-Tetrachle	oroethane		1	U
96-18-4	1,2,3-Trichloropr	ropane		1	U
108-86-1	Bromobenzene			1	U
103-65-1	n-Propylbenzene	9		1	U
95-49-8	2-Chlorotoluene			1	U
106-43-4	4-Chlorotoluene			1	U
108-67-8	1,3,5-Trimethylb			1	U
98-06-6	tert-Butylbenzen	<u>e</u>		1	U
95-63-6	1,2,4-Trimethylb			1	U
135-98-8	sec-Butylbenzen			_1	U
99-87-6	p-Isopropyltoluer	ne		1	U
541 <i>-</i> 73 <u>-1</u>	1,3-Dichlorobenz	zene		1	<u>U</u>
106-46-7	1,4-Dichlorobenz	zene		1	U
104-51-8	n-Butylbenzene			1	<u>U</u>
95-50 1	1,2-Dichlorobenz	zene		1	U
96-12 <b>-8</b>	1,2-Dibromo-3-c			1	<u>U</u>
120-82-1	1,2,4-Trichlorobe			1	U
87-6 <b>8-</b> 3	Hexachlorobutad	diene		1	U
91-20-3	Naphthalene			1	<u>U.J.</u>
87-61-6	1,2,3-Trichlorobe	enzene		1	U .



#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

1ST RES WELL

Lab Name:	HIMCO	LANDFIL	<u>.L</u>		Contra	ct:	CRL				
Lab Code:	5-CRL		Case No.: 2	0010009	SAS	No.	:	SE	OG No.:	GCM	S022
Matrix: (soil/v	water)	WATER				Lab	Sample I	ID:	2001SK	01S01	
Sample wt/vo	ol:	25.0	(g/ml) !	ML		Lab	File ID:		7C1122	11.D	
Level: (low/r	ned)	LOW				Date	e Receive	ed:	11/17/00	)	
% Moisture: r	not dec.					Date	e Analyze	d:	11/22/00	)	
GC Column:	DB-62	4 _ ID:	0.53 (mm	١)		Dilu	tion Facto	or:	1.0		_
Soil Extract V	/olume:		(uL)			Soil	Aliquot V	olur	ne:		_ (uL)
Number TICs	s found:	0			-		ON UNIT UG/L	-			
CAS NO.		COMP	MAN DNUC	Ξ			RT	EST	r. CONC	<i>)</i> .	Q

EPA SAMPLE NO.



Lab Name:	HIMCO	LANDFIL	<u>L</u>		Contract: CRL		
Lab Code:	5-CRL	C	ase No.:	20010009	SAS No.: S	SDG No.: GCMS022	2
Matrix: (soil/v	water)	WATER			Lab Sample ID	: 2001SK01S02	_
Sample wt/v	ol:	25.0	(g/ml)	ML	Lab File ID:	7C112212.D	
Level: (low/r	med)	LOW			Date Received:	: 11/17/00	

% Moisture: not dec.

Date Analyzed: 11/22/00

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

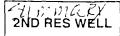
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

#### CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L		Q
75-01-4	Vinyl chloride			1	U
74-87-3	Chloromethane			1	U
74-83-9	Bromomethane			1	Ū
75-00-3	Chloroethane			1	U
107-64-1	Acrolein			10	U
75-35-4	1,1-Dichloroethene			1	U
115-10-6	Ethyl ether		26	30	ED.
75-71-8	Dichlorofluorometh	ane		5	
67-64-1	Acetone			10	U
75-15-0	Carbon disulfide			11	U
75-09-2	Methylene chloride			1	U
107-13-1	Acrylonitrile			10	U
156-60-5	trans-1,2-Dichloroe	thene		1	U
75-34-3	1,1-Dichloroethane			4	
78-93-3	2-Butanone			10	U
156-59-2	cis-1,2-Dichloroeth	ene		2	
594-20-7	2,2-Dichloropropan	e		2	U
74-97-5	Bromochlorometha	ne		_ 1	U
67-66-3	Chloroform			11	U
71-55-6	1,1,1-Trichloroetha	ne		_ 1	U
563-58-6	1,1-Dichloropropen	e		1	U
56-23-5	Carbon tetrachlorid	e		1	U
107-06-2	1,2-Dichloroethane			1	
71-43-2	Benzene			1	U
79-01-6	Trichloroethene			1_	U _
78-87-5	1,2-Dichloropropan	e		88	<u></u>
75-27-4	Bromodichlorometh	nane		1	U
10061-01-5	cis-1,3-Dichloropro	pene		1	U
108-10-1	4-Methyl-2-pentano	ne		5	U
108-88-3	Toluene			1	U
10061-02-6	trans-1,3-Dichlorop	ropene		2	U
110-75-8	2-Chloroethyl vinyl	ether			UR
79-00-5	1,1,2-Trichloroetha	ne		1	U
142-28-9	1,3-Dichloropropan	е		1	U
127-18-4	Tetrachloroethene			1	U
591-78-6	2-Hexanone			2	U
124-48-1	Dibromochlorometh	nane		1	U
106-93-4	1,2-Dibromoethane			1	U
108-90-7	Chlorobenzene			1	U

71/12/100

EPA SAMPLE NO.



Lab Name: HIMCO LANDFILL Contract: CRL 5-CRL Case No.: 20010009 SAS No.: SDG No.: GCMS022 Lab Code: Matrix: (soil/water) WATER Lab Sample ID: 2001SK01S02 Lab File ID: 7C112212.D Sample wt/vol: 25.0 (g/ml) ML LOW Level: (low/med) Date Received: 11/17/00 % Moisture: not dec. Date Analyzed: 11/22/00 Dilution Factor: 1.0 GC Column: DB-624 ID: 0.53 (mm) Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

#### CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L		Q
630-20-6	1,1,1,2-Tetrachlo	roethane		1	U
100-41-4	Ethylbenzene			1	U
1083836423	m- &/or p-Xylene			1	U
95-47-6	o-Xylene			1	U
100-42-5	Styrene			1	U
75-25-2	Bromoform	,		11	U
98-82-8	Isopropylbenzene	·		1	U
79-34-5	1,1,2,2-Tetrachlor	roethane		1	U
96-18-4	1,2,3-Trichloropro	pane	<del> </del>	1	U
108-86-1	Bromobenzene			1	U
103-65-1	n-Propylbenzene			1	U
95-49-8	2-Chlorotoluene	·		1	U
106-43-4	4-Chlorotoluene	,		1	<u>U</u>
108-67-8	1,3,5-Trimethylbe	nzene		1	U
98-06-6	tert-Butylbenzene			1	U
95-63-6	1,2,4-Trimethylbe			1	U
135-98-8	sec-Butylbenzene			1	U
99-87-6	p-Isopropyltoluen			1	<u>U</u>
541-73-1	1,3-Dichlorobenze			1	U
106-46-7	1,4-Dichlorobenze	ene			U
104-51-8	n-Butylbenzene			1	<u> </u>
95-50-1	1,2-Dichlorobenze	ene		1	<u> </u>
96-12-8	1,2-Dibromo-3-ch	loropropane		1	U
120-82-1	1,2,4-Trichlorober	nzene		1.	<u>U</u>
87-68-3	Hexachlorobutadı	ene		1	U
91-20-3	Naphthalene			1	Ur
87-61-6	1,2,3-Trichlorober	nzene		1	U

#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

2ND RES WELL

Lab Name:	HIMCO	LANDFI	LL	Co	ntract:	CRL	2110	INEO WE	<i>A</i> _L
Lab Code:	5-CRL		Case No.: 200	10009	SAS No.	:S	DG No.:	GCMS	022
Matrix: (soil/v	water)	WATER	?		Lab	Sample ID:	2001SK	01S02	
Sample wt/vo	of:	25.0	(g/ml) ML		Lab	File ID:	7C1122	12.D	
'_evel: (low/n	ned)	LOW			Date	e Received:	11/17/00	)	
% Moisture: r	not dec.				Date	e Analyzed:	11/22/00	)	
GC Column:	DB-62	4 ID:	0.53 (mm)		Dilut	tion Factor:	1.0		
Soil Extract V	'olume:		(uL)		Soil	Aliquot Volu	me:		(uL
						ON UNITS:			
Number TICs	found:	0		(ug/L OI	ug/Ng)	UG/L			
CAS NO		COMP	OLIND NAME			RT FS	T CONC		$\circ$

EPA SAMPLE NO.

Lab Name: HIMCO LANDFILL

Contract: CRL

Lab Code:

5-CRL Case No.: 20010009 SAS No.: SDG No.: GCMS022

Matrix: (soil/water) WATER

Lab Sample ID: 2001SK01D02

Sample wt/vol:

Lab File ID:

7C112213.D

25.0

(g/ml) ML

Level: (low/med)

LOW

Date Received: 11/17/00

% Moisture: not dec.

Date Analyzed: 11/22/00

GC Column: DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:

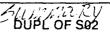
(uL)

Soil Aliquot Volume:

(uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L		Q
75-01-4	Vinyl chloride			1	U
74-87-3	Chloromethane			1	U
74-83-9	Bromomethane			1	U
75-00-3	Chloroethane			1	U
107-64-1	Acrolein			10	U
75-35-4	1,1-Dichloroethene			1	U
115-10-6	Ethyl ether			31	ED
75-71-8	Dichlorofluorometha	ne		6	
67-64-1	Acetone			10	U
75-15-0	Carbon disulfide			1	U
75-09-2	Methylene chloride			_ 1	U
107-13-1	Acrylonitrile			10	U
156-60-5	trans-1,2-Dichloroet	hene		11	U
75-34-3	1,1-Dichloroethane			_ 4	
78-93-3	2-Butanone			10	U
156-59-2	cis-1,2-Dichloroethe	ne		3	
594-20-7	2,2-Dichloropropane	<b>;</b>		2	U
74-97-5	Bromochloromethan	е	-	1	U
67-66-3	Chloroform			1	U
71-55-6	1,1,1-Trichloroethan	е	_	1	U
563-58-6	1,1-Dichloropropene			1	U
56-23-5	Carbon tetrachloride			1	U
107-06-2	1,2-Dichloroethane			_1	
71-43-2	Benzene		_	1,	U _
79-01-6	Trichloroethene			1	U
78-87-5	1,2-Dichloropropane	<b>,</b>		8	
75-27-4	Bromodichlorometha	ane		1	U
10061-01-5	cis-1,3-Dichloroprop	ene		1	U
108-10-1	4-Methyl-2-pentanor	ne		5	U
108-88-3	Toluene	_		1	U
10061-02-6	trans-1,3-Dichloropr	opene		2	U
110-75-8	2-Chloroethyl vinyl e	ther		5	<u> </u>
79-00-5	1,1,2-Trichloroethan	e		1	Ů
142-28-9	1,3-Dichloropropane	!		1	U
127-18-4	Tetrachloroethene			1	U
591-78-6	2-Hexanone			2	Ū
124-48-1	Dibromochlorometha	ane		1	Ū
106-93-4	1,2-Dibromoethane			1	U
108-90-7	Chlorobenzene			1	U

EPA SAMPLE NO.



Lab Name:	НІМСО	LANDFI	LL	Contract: CRL		DOPL OF 3	82
Lab Code:	5-CRL		Case No.: 2001000	9 SAS No.:	SD	G No.: GCMS	022
Matrix: (soil/v	water)	WATER	3	Lab Sample	D: 2	2001SK01D02	
Sample wt/vo	ol:	25.0	(g/ml) ML	Lab File ID:	-	7C112213.D	-
Level: (low/r	ned)	LOW		Date Receiv	ved:	11/17/00	
% Moisture:	not dec.			Date Analyz	zed:	11/22/00	
GC Column:	DB-62	4 ID:	0.53 (mm)	Dilution Fac	tor:	1.0	
Soil Extract \	/olume:		(111.)	Soil Aliquot	Volum	ne.	(ml

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L		Q
630-20-6	1,1,1,2-Tetrachlo	roethane		1	U
100-41-4	Ethylbenzene			1	U
1083836423	m- &/or p-Xylene			1	U
95-47-6	o-Xylene			1	U
100-42-5	Styrene	,,		1	U
75-25-2	Bromoform			1	U
98-82-8	Isopropylbenzene		· · · · · · · · · · · · · · · · · · ·	1	U
79-34-5	1,1,2,2-Tetrachlo	roethane		1	U
96-18-4	1,2,3-Trichloropro	pane		1	<u>U</u>
108-86-1	Bromobenzene			1	<u> </u>
103-65-1	n-Propylbenzene			1	<u>U</u>
95-49-8	2-Chlorotoluene			1	<u>U</u>
106-43-4	4-Chlorotoluene			_1	U
108-67-8	1,3,5-Trimethylbe			1	U
98-06-6	tert-Butylbenzene			1	<u>U</u>
95-63-6	1,2,4-Trimethylbe			1	U
135-98-8	sec-Butylbenzene			1	<u>U</u>
99-87-6	p-Isopropyltoluen			1	<u>U</u>
541-73-1	1,3-Dichlorobenze	ene		1 .	<u>U</u>
106-46-7	1,4-Dichlorobenze	ene <u> </u>	—	<u>1</u>	U
104-51-8	n-Butylbenzene			1	<u>U</u>
95-50-1	1,2-Dichlorobenze	ene į		1·	U_
96-12-8	1,2-Dibromo-3-ch	loropropane		1	<u>U</u>
120-82-1	1,2,4-Trichlorober	nzene		1	U
87-68-3	Hexachlorobutadi	ene		_1	U
91-20-3	Naphthalene	• • •		_1	Ui
87-61-6	1,2,3-Trichlorober	nzene		1	U

# 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name:	HIMCO	LANDFIL	L		Contract:	CRL		L		
Lab Code:	5-CRL		Case No.:	20010009	SAS No	o.:	SD	G No.:	GCMS	022
Matrix: (soil/	water)	WATER			La	b Sample	ID: 2	001SK	01D02	
Sample wt/vo	ol:	25.0	(g/ml)	ML	La	b File ID:	7	C1122	13.D	
Level: (low/r	med)	LOW			Da	ate Receive	ed: <u>1</u>	1/17/00	)	
% Moisture:	not dec.				Da	ate Analyze	ed: 1	1/22/00	)	
GC Column:	DB-62	4_ ID: (	0.53 (m	ım)	Dil	ution Fact	or: 1	.0		_
Soil Extract V	/olume:		(uL)		So	ıl Aliquot V	olum/	e:		(uL
Number TICs	s found:	0				TION UNIT		<b></b>		
14dillber 1103	, lound.		-							
CAS NO.		COMPO	UND NAM	ΛE		RT	EST.	CONC	;.	Q



EPA SAMPLE NO.



Lab Name: HIMCO LANDFILL Contract: CRL

Lab Code: 5-CRL Case No.: 20010009 SAS No.: SDG No.: GCMS022

Matrix: (soil/water) WATER Lab Sample ID: 2001SK01S03

Sample wt/vol: 25.0 (g/ml) ML Lab File ID: 7C112214.D

Level: (low/med) LOW Date Received: 11/17/00

% Moisture: not dec. Date Analyzed: 11/22/00

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

#### CONCENTRATION UNITS:

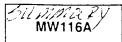
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L		Q
75-01-4	Vinyl chloride			1	U
74-87-3	Chloromethane			1	U
74-83-9	Bromomethane			1	U
75-00-3	Chloroethane			1	U
107-64-1	Acrolein			10	U
75-35-4	1,1-Dichloroethe	ne		1	U
115-10-6	Ethyl ether		100	1 <del>20</del>	END
75-71 <b>-</b> 8	Dichlorofluorome	ethane		10	
67-64-1	Acetone			10	U
75-15-0	Carbon disulfide			1	U
75-09-2	Methylene chlori	de		11	U
107-13-1	Acrylonitrile			10	U
156-60-5	trans-1,2-Dichlor	oethene		11	<u> </u>
75-34-3	1,1-Dichloroetha	ne		9	
78-93-3	2-Butanone			10	U
156-59-2	cis-1,2-Dichloroe	thene		1	U
594-20-7	2,2-Dichloroprop	ane		2	<u> </u>
74-97-5	Bromochloromet	hane		1	U
67-66-3	Chloroform			. 1	<u>U</u>
71-55-6	1,1,1-Trichloroetl	nane		_ 1	<u>U</u>
563-58- <u>6</u>	1,1-Dichloroprop	ene		1	<u>U</u>
56-23 3	Carbon tetrachlo	ride		1	U_
107-06-2	1,2-Dichloroetha	ne		1	<u>u                                    </u>
71-43-2	Benzene			8	
79-01-6	Trichloroethene			. 1_	Ų
78-87-5	1,2-Dichloroprop			2	= .==
75-27-4	Bromodichlorome	ethane		1	<u>U</u>
10061-01-5	cis-1,3-Dichlorop	ropene		1	U
108-10-1	4-Methyl-2-penta	none		5	U
108-88-3	Toluene		# :	1	U
10061-02-6	trans-1,3-Dichlor	opropene		2	<u> </u>
110-75-8	2-Chloroethyl vin			\$	<b>4</b> R
79-00-5	1,1,2-Trichloroeth			1	<u>U</u>
142-28-9	1,3-Dichloroprop	ane		. 1	U
127-18-4	Tetrachloroethen	e,		1	<u> </u>
591-78-6	2-Hexanone			2	<u> </u>
124-48-1	Dibromochlorome			1	U
106-93-4	1,2-Dibromoetha	ne		1	<u>U</u>
108-90-7	Chlorobenzene			1	U

1178/00

**FORM I VOA** 

3/90

EPA SAMPLE NO.



(uL)

Lab Name: HIMCO LANDFILL Contract: CRL Case No.: 20010009 SAS No.: 5-CRL SDG No.: GCMS022 Lab Code: Lab Sample ID: 2001SK01S03 WATER Matrix: (soil/water) Sample wt/vol: 25.0 (g/ml) ML Lab File ID: 7C112214.D Level: (low/med) LOW Date Received: 11/17/00 % Moisture: not dec. Date Analyzed: 11/22/00 Dilution Factor: 1.0 GC Column: DB-624 ID: 0.53 (mm)

Soil Extract Volume: (uL) Soil Aliquot Volume:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L		Q
630-20-6	1,1,1,2-Tetrachl	oroethane		1	U
100-41-4	Ethylbenzene	orocarane		<del>-</del>	U
1083836423	m- &/or p-Xylene	e		1	U
95-47-6	o-Xylene	T		1	Ū
100-42-5	Styrene			1	Ū
75-25-2	Bromoform			1	U
98-82-8	Isopropylbenzer	ne		1	U
79-34-5	1,1,2,2-Tetrachle			1	U
96-18-4	1,2,3-Trichloropi	ropane		1	U
108-86-1	Bromobenzene			1	U
103-65-1	n-Propylbenzen	e		1	U
95-49-8	2-Chlorotoluene			1	U
106-43-4	4-Chlorotoluene			. 1	U
108-67-8	1,3,5-Trimethylb	enzene			U
98-06-6	tert-Butylbenzen			1	U
95-63-6	1,2,4-Trimethylb	enzene		1	U
135-98-8	sec-Butylbenzer	ie		1	U
99-8 <u>7-6</u>	p-Isopropyltolue		=	1	U
541-73-1	1,3-Dichloroben			1	U
106-46-7	1,4-Dichlorobeni	zene		1	U
104-51-8	n-Butylbenzene			1	U
95-50-1	1,2-Dichloroben			. 1	. U
96-12-8	1,2-Dibromo-3-c			1	U
120-82-1	1,2,4-Trichlorobe			11	U
87-68-3	Hexachlorobutad	diene		1	U
91-20-3	Naphthalene			1	UT
87-61-6	1,2,3-Trichlorobe	enzene		1	U

#### 1E

# VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name:	HIMCC	LANDFIL	L .		Contrac	t: CRL				
Lab Code:	5-CRL		ase No.:	20010009	SAS	No.:	SI	OG No.:	GCM	S022
Matrix: (soil/\	water)	WATER				Lab Sam	ple ID:	2001SK	01S03	,
Sample wt/vo	ol:	25.0	(g/ml)	ML	_	Lab File	ID:	7C1122	14.D	
Level: (low/r	ned)	LOW				Date Red	ceived:	11/17/00	)	_
% Moisture:	not dec.					Date Ana	alyzed:	11/22/00	)	
GC Column:	DB-62	24 ID: 0	).53 (m	m)		Dilution F	actor:	1.0		_
Soil Extract V	/olume:		(uL)			Soil Aliqu	ot Volur	ne:		(uL)
Number TICs	found:	1			ICENTR _ or ug/k	ATION L	JNITS: JG/L			
CAS NO.		СОМРО	UND NAM	1E		RT	EST	r. CONC	<b>)</b> .	Q
1. 000593	3-70-4	Methane,	chlorofluc	ro- (CAS)	\$\$	3.39	9		4	JN

EPA SAMPLE NO.

Lab Name: HIMCO LANDFILL 5-CRL

Contract: CRL

Case No.: 20010009 SAS No.:

SDG No.: GCMS022

Matrix: (soil/water)

WATER

Lab Sample ID: 2001SK01S04

Sample wt/vol:

Lab Code:

Lab File ID: 25.0 (g/ml) ML

7C112215.D

Level: (low/med)

LOW

Date Received: 11/17/00

% Moisture: not dec.

Date Analyzed: 11/22/00

Soil Extract Volume:

GC Column: DB-624 ID: 0.53 (mm)

(uL)

Dilution Factor: 1.0

Soil Aliquot Volume:

(uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L		Q
75-01-4	Vinyl chloride			1	U
74-87-3	Chloromethane			1	U
74-83-9	Bromomethane			1	U
75-00-3	Chloroethane			1	
107-64-1	Acrolein			10	Ų
75-35-4	1,1-Dichloroether	 ne		1	U
115-10-6	Ethyl ether		49	48	ED
75-71-8	Dichlorofluorome	thane		6	
67-64-1	Acetone			10	U
75-15-0	Carbon disulfide			1	U
75-09-2	Methylene chloric	le		1	U
107-13-1	Acrylonitrile			10	U
156-60-5	trans-1,2-Dichlord	pethene		1	U
75-34-3	1,1-Dichloroethar	ne		14	
78-93-3	2-Butanone			10	U
156-59-2	cis-1,2-Dichlorget	hene		1	U
594-20-7	2,2-Dichloropropa	ane		2	U
74-97-5	Bromochlorometh	ane		1	U
67-66-3	Chloroform			1	U
71-55-6	1,1,1-Trichloroeth	ane		1	U
563-58-6	1,1-Dichloroprope	ene		1	U_
56-23-5	Carbon tetrachlor	ıde	= • •	.1	<u>U</u>
107-06-2	1,2-Dichloroethan	е		. 1	U
71-43-2	Benzene		-	2	
79-01-6	Trichloroethene	<b></b>		. 1	U
78-87-5	1,2-Dichloropropa	ine		_ 1	U
75-27-4	Bromodichlorome			. 1 .	U U
10061-01-5	cis-1,3-Dichloropr	opene		1	U
108-10-1	4-Methyl-2-pentar	none		5	U
108-88-3	Toluene			1	U
100 <u>61-02-6</u>	trans-1,3-Dichlorg	propene		2	<u>U</u>
110-75-8	2-Chloroethyl viny			_ <b>\$</b>	#7
79-00-5	1,1,2-Trichloroeth			1	U
142-28-9	1,3-Dichloropropa	ine_		1	U
127-18-4	Tetrachloroethene	<b>9</b>		1	<u>U</u>
591-78-6	2-Hexanone			2	U
124-48-1	Dibromochlorome	thane	<del>_</del>	1	<u> </u>
106-93-4	1,2-Dibromoethar	<u>ne</u>		1	<u> </u>
108-90-7	Chlorobenzene			1	U .

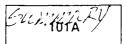
EPA SAMPLE NO.

Lab Name: HIMCO LANDFILL Contract: CRL Lab Code: 5-CRL Case No.: 20010009 SAS No.: SDG No.: GCMS022 Matrix: (soil/water) WATER Lab Sample ID: 2001SK01S04 Lab File ID: Sample wt/vol: 25.0 (g/ml) ML 7C112215.D Level: (low/med) LOW Date Received: 11/17/00 Date Analyzed: 11/22/00 % Moisture: not dec. Dilution Factor: 1.0 GC Column: DB-624 ID: 0.53 (mm) Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L		Q
630-20-6	1,1,1,2-Tetrachl	oroethane		1	U
100-41-4	Ethylbenzene	0.00.10.10		1	Ü
1083836423	m- &/or p-Xylen	e		1	Ū
95-47-6	o-Xylene			1	U
100-42-5	Styrene			1	U
75-25-2	Bromoform			1	U
98-82-8	Isopropylbenzer	ne		1	U
79-34-5	1,1,2,2-Tetrachl	oroethane		1	U
96-18-4	1,2,3-Trichlorop	ropane		1	U
108-86-1	Bromobenzene			1	U
103-65-1	n-Propylbenzen	e		1	U
95-49-8	2-Chlorotoluene			1	U
106-43-4	4-Chlorotoluene			11	U
108-67-8	1,3,5-Trimethylb	enzene		1	U
98-06-6	tert-Butylbenzer			1	U
95-63-6	1,2,4-Trimethylb	enzene		1	U
135-98-8	sec-Butylbenzer	ne		1	U
99-87-6	p-Isopropyltolue	ne		11	U
541-73-1	1,3-Dichloroben	<u>zene                                    </u>		1	<u>U</u>
106-46-7	1,4-Dichloroben:	zene		1	U
104-51-8	n-Butylbenzene			1	U
95-50 1	1,2-Dichloroben			1	U
96-12-8	1,2-Dibromo-3-c	hloropropane		1	U
120-82-1	1,2,4-Trichlorobe	enzene		1	U
87-68-3	Hexachlorobutae	di <u>e</u> ne		1	<u>U</u>
91-20-3	Naphthalene			. 1	UD
87-61-6	1,2,3-Trichlorobe	enzene		1	U.

#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.



Lab Name:	HIMCO	LANDFILI		Contract:	CRL		. L		
Lab Code:	5-CRL	С	ase No.: 20010	0009 SAS N	lo.:	SI	DG No.:	GCMS	3022
Matrix: (soil/	water)	WATER	· · · · · · · · · · · · · · · · · · ·	Li	ab Samp	le ID:	2001SK	01S04	
Sample wt/ve	ol:	25.0	(g/mi) ML	L	ab File II	D:	7C1122	15.D	
Level: (low/r	med)	LOW	<del>_</del>	D	ate Rece	eived:	11/17/00	)	_
% Moisture:	not dec.			D	ate Anal	yzed:	11/22/00	)	
GC Column:	DB-62	4 ID: 0	.53 (mm)	D	ilution Fa	actor:	1.0		_
Soil Extract Volume:			(uL)	S	oil Aliquo	t Volui	me:		(uL)
			(	CONCENTRA	TION UI	NITS:			
Number TICs	s found:	1	(	ug ∟ or ug/Kg	) U(	G/L			
CAS NO.		СОМРО	UND NAME		RT	ES	T. CONC	<b>)</b> .	Q
1. 000593	3-70-4	Methane,	chlorofluoro- (C	CAS) \$\$	3.38			1	JN

EPA SAMPLE NO.

METHOD BLANK

Lab Name:	HIMCO	LANDF	ILL	Contract: CRL	
Lab Code:	5-CRL		Case No.: 20010009	SAS No.:	SDG No.: GCMS022
Matrix: (soil/v	water)	WATE	<b>R</b>	Lab Sample ID	: 2001SK01R01
Sample wt/vo	ol:	25.0	(g/ml) ML	Lab File ID:	7C112216.D
Level: (low/r	ned)	LOW		Date Received	11/17/00
% Moisture: ı	not dec.			Date Analyzed:	11/22/00
GC Column:	DB-62	4 ID:	0.53 (mm)	Dilution Factor:	1.0
Soil Extract V	/olume:		(uL)	Soil Aliquot Vol	ume: (uL

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	_	Q
75-01-4	Vinyl chloride			1	U
74-87-3	Chloromethane			1	U
74-83-9	Bromomethane			1	U
75-00-3	Chloroethane			1	Ū
107-64-1	Acrolein			10	U
75-35-4	1,1-Dichloroether	ne		1	Ú
115-10-6	Ethyl ether			1	U
75-71-8	Dichlorofluorome	thane		11	U
67-64-1	Acetone			10	U
75-15-0	Carbon disulfide			1	U
75-09-2	Methylene chloric	le		3	
107-13-1	Acrylonitrile			10	U
156-60-5	trans-1,2-Dichlord	oethene		1	U
75-34-3	1,1-Dichloroethar	ne		1	U
78-93-3	2-Butanone			10	<u>U</u>
156-59-2	cis-1,2-Dichloroet	thene		1	U
594-20-7	2,2-Dichloropropa	ine		2	<u>U</u>
74-97-5	Bromochlorometh	nane		. 1	U.
67-66-3	Chloroform			5	
71-55-6	1,1.1-Trichloroeth	iane		. 1	U
563- <u>58-</u> 6	1,1-Dichloroprope	ene		1	<u> </u>
56-23-5	Carbon tetrachlor	id <u>e</u>		1	U
107-06-2	1,2-Dichloroethan	ne		1	
71-43-2	Benzene			1	_ U
79-01-6	Trichloroethene			1	<u>U</u>
78-87-5	1,2-Dichloropropa	ine		, ,1 , ,	U
75-27-4	Bromodichlorome	thane		1	
10061-01-5	cis-1,3-Dichloropr	opene		1	U
108-10-1	4-Methyl-2-pentar	none		5	U
108-88-3	Toluene			1	Ų.
10061-02-6	trans-1,3-Dichloro	propene		2	U _
110-75-8	2-Chloroethyl viny	/l ether		\$	NR
79-00-5	1,1,2-Trichloroeth	ane		1	_ U
142-28-9	1,3-Dichloropropa	ine		1	U
127-18-4	Tetrachloroethene	9		1	U
591-78-6	2-Hexanone			2	U
124-48-1	Dibromochlorome	thane		1	U
106-93-4	1,2-Dibromoethar			1	U
108-90-7	Chlorobenzene			1	U

EPA SAMPLE NO.

METHOD BLANK

Lab Name: HIMCO LANDFILL Contract: CRL Case No.: 20010009 SAS No.: SDG No.: GCMS022 Lab Code: 5-CRL WATER Lab Sample ID: 2001SK01R01 Matrix: (soil/water) Sample wt/vol: 25.0 (g/ml) ML Lab File ID: 7C112216.D LOW Level: (low/med) Date Received: 11/17/00 % Moisture: not dec. Date Analyzed: 11/22/00 DB-624 ID: 0.53 Dilution Factor: 1.0 GC Column: (mm) Soil Aliquot Volume: (uL) Soil Extract Volume: **CONCENTRATION UNITS:** COMPOUND CAS NO. (ug/L or ug/Kg) UG/L Q 1,1,1,2-Tetrachloroethane 630-20-6 Ethylbenzene 100-41-4 m- &/or p-Xylene 1083836423 o-Xylene 95-47-6 100-42-5 Styrene U Bromoform 75-25-2 98-82-8\_\_\_ Isopropylbenzene 1,1,2,2-Tetrachloroethane U 79-34-5 1,2,3-Trichloropropane 1 96-18-4 U Bromobenzene 108-86-1 U n-Propylbenzene 103-65-1 U 2-Chlorotoluene 95-49-8 U 106-43-4 4-Chlorotoluene 108-67-8 1,3,5-Trimethylbenzene 1 tert-Butylbenzene 98-06-6 95-63-6 1,2,4-Trimethylbenzene 135-98-8 sec-Butylbenzene p-Isopropyltoluene 99-87-6 541-73-1 1,3-Dichlorobenzene 106-46-7

1.4-Dichlorobenzene

1.2-Dichlorobenzene

104-51-8

96-12-8

120-82-1 87-68-3\_\_\_

87-61-6

95-50-1

91-20-3

n-Butylbenzene\_\_\_\_

1,2,4-Trichlorobenzene

Hexachlorobutadiene

1,2,3-Trichlorobenzene

Naphthalene

1.2-Dibromo-3-chloropropane

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#### 1E VOLATILE ORGANICS ANALYSIS DATA SHEET COA SAMPLE NO. TENTATIVELY IDENTIFIED COMPOUNDS

**METHOD BLANK** Lab Name: HIMCO LANDFILL Contract: CRL Lab Code: 5-CRL Case No.: 20010009 SAS No.: SDG No.: GCMS022 Matrix: (soil/water) WATER Lab Sample ID: 2001SK01R01 Sample wt/vol: 25.0 (g/ml) ML Lab File ID: 7C112216.D Date Received: 11/17/00 Level: (low/med) LOW % Moisture: not dec. Date Analyzed: 11/22/00 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL) CONCENTRATION UNITS: UG/L (ug/L or ug/Kg) Number TICs found: 0 RT EST. CONC. CAS NO. COMPOUND NAME

EPA SAMPLE NO.

TRIP BLANK

Lab Name: HIMCO LANDFILL Contract: CRL Lab Code: 5-CRL Case No.: 20010009 SAS No.: SDG No.: GCMS022 Lab Sample ID: 2001SK01R02 Matrix: (soil/water) WATER 25.0 (g/ml) ML Lab File ID: 7C112217.D Sample wt/vol: Date Received: 11/17/00 Level: (low/med) LOW % Moisture: not dec. Date Analyzed: 11/22/00 GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0 (uL) Soil Aliquot Volume: Soil Extract Volume: (uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	<u>U</u> G/L		Q
75-01-4	Vinyl chloride			1	U
74-87-3	Chloromethane			1	Ū
74-83-9	Bromomethane			1	Ü
75-00-3	Chloroethane			· 1	Ū
107-64-1	Acrolein			10	
75-35-4	1,1-Dichloroethen	e		1	U
115-10-6	Ethyl ether			1	U
75-71-8	Dichlorofluoromet	hane		1	U
67-64-1	Acetone			10	U
75-15-0	Carbon disulfide			1	U
75-09-2	Methylene chlorid			1	
107-13-1	Acrylonitrile			10	U
156-60-5	trans-1,2-Dichloro	ethene		11	U
75-34-3	1,1-Dichloroethan	e		1	U
78-93-3	2-Butanone			10	U
156-59-2	cis-1,2-Dichloroeti	nene		_1 _	U
594-20-7	2,2-Dichloropropa			2	U
74-97-5	Bromochlorometh	ane		1	U
67-66-3	Chloroform			1	Ų .
71-55-6	1,1,1-Trichloroetha	ane		1	U
563-58-6	1,1-Dichloroprope	ne		1	_ U
56-23 <b>-</b> 5	Carbon tetrachlori	de	-	1	U .
107-06-2	1,2-Dichloroethan	е		1	Ñ
71-43-2	Benzene			1	Ŭ
79-01-6	Trichloroethene			1	U
78-87-5	1,2-Dichloropropa			1	U
75-2 <u>7-4</u>	Bromodichloromet			1	U
10061-01-5	cis-1,3-Dichloropri			1	<u>U</u>
108-10-1	4-Methyl-2-pentan	one		5	U .
108-88-3	Toluene			1	U
10061-02-6	trans-1,3-Dichloro			2	U
110-75-8	2-Chloroethyl viny			<b>_\$</b>	MK
79-00-5	1,1,2-Trichloroetha			1	U
142-28-9	1,3-Dichloropropa			1	U _
127-18-4	Tetrachloroethene	•		1	U
591-78-6	2-Hexanone			2	<u>U</u>
124-48-1	Dibromochlorome	thane		.1	U
106-93-4	1,2-Dibromoethan	<u>e</u>		1	U
108-90-7	Chlorobenzene			1	Ú .

# 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK

Lab Name: HIMCO LANDFILL Contract: CRL Case No.: 20010009 SAS No.: SDG No.: GCMS022 Lab Code: 5-CRL Matrix: (soil/water) WATER Lab Sample ID: 2001SK01R02 25.0 (g/ml) ML Sample wt/vol: Lab File ID: 7C112217.D Level: (low/med) LOW Date Received: 11/17/00 % Moisture: not dec. Date Analyzed: 11/22/00 Dilution Factor: 1.0 GC Column: DB-624 ID: 0.53 (mm) Soil Aliquot Volume: (uL) Soil Extract Volume: (uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L		Q
630-20-6	1,1,1,2-Tetrachi	oroethane		1	U
100-41-4	Ethylbenzene			1	U
1083836423	m- &/or p-Xylene	9		1	U
95-47-6	o-Xylene			11	U
100-42-5	Styrene			1	U
75-25-2	Bromoform			1	U
98-82-8	Isopropylbenzen	e		1	U
79-34-5	1,1,2,2-Tetrachic	oroethane		1	U
96-18-4	1,2,3-Trichloropr	opane		1	U
108-86-1	Bromobenzene			1	U
103-65-1	n-Propylbenzene	9		1	U
95-49-8	2-Chlorotoluene			1	U '
106-43-4	4-Chlorotoluene			11	U
108-67-8	1,3,5-Trimethylb	enzene		1	<u> </u>
98-06-6	tert-Butylbenzen	<u>e</u>		1	U
9 <u>5</u> -63 <u>-6</u>	1,2,4-Trimethylb	enzene		1	U
135-98-8	sec-Butylbenzen	e		1	U
99-87-6_	p-Isopropyltoluer	ne		1	<u>U</u>
541-73-1	1,3-Dichlorobenz	ene		1	<u>U</u>
106-46-7	1,4-Dichlorobenz	rene	· .	1	U
104-51-8	n-Butylbenzene			1	U
95-50-1	1,2-Dichlorobenz	rene _		1	U
96-12-8	1,2-Dibromo-3-cl	nloropropane		1	U
120-82-1	1,2,4-Trichlorobe	enzene	_	1	U
87-68-3	Hexachlorobutad	liene		1	U
91-20-3	Naphthalene			11	U
87-61-6	1,2,3-Trichlorobe	enzene		1	U

# 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK

Lab Name:	HIMCO	LANDFIL	L	Con	tract:	CRL			
Lab Code:	5-CRL	C	ase No.: 200	10009 S	AS No	o.:	SDG No.:	GCMS	022
Matrix: (soil/v	vater)	WATER			La	ab Sample ID	2001SK	01R02	<del>-</del> -
Sample wt/vo	ol:	25.0	(g/ml) ML	·	La	ab File ID:	7C1122	17.D	
Level: (low/n	med)	LOW			Da	ate Received:	11/17/00	0	
% Moisture: r	not dec.				Da	ate Analyzed:	11/22/00	)	
GC Column:	DB-62	4_ ID: (	0.53 (mm)		Dil	lution Factor:	1.0		
Soil Extract V	/olume:		(uL)		So	oil Aliquot Vol	ume:		(uL)
Number TICs	found:	0	w. <del></del>			TION UNITS:	-		
CAS NO		COMPO	UND NAME			BT F	ST CONC	:	Ω



#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



# REGION 5 CENTRAL REGIONAL LABORATORY

#### 536 SOUTH CLARK STREET

## **CHICAGO, ILLINOIS 60605**

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DEC 1 9 2000

Subject:

Review of Region 5 Data for HIMCO Landfill

From:

Roger Rudinsky, Chemist RR

Region 5 Central Regional Laboratory

To:

Gwen Massenburg SR-6J

Attached are the results for Site: HIMCO Landfill

CRL Data Set Number: 20010009

for analyses of : ABNs

Results are reported for sample numbers: (List of sample numbers) 2001SK01S01- 2001SK01S04 2001SK01S02MS, 2001SK01S02MSD, 2001SK01R01 and 2001SK01D02.

#### Results Status:

- (X) Acceptable for Use
- (X) Data Qualified, but Acceptable for use For the compound data qualified UJ or J, please see the attached case narrative.
- ( ) Data Unacceptable for Use

ere.	Sylvia Priffic DES 1 3 2000  CRL Data Management Coordinator and Date Received
	Date Transmitted: DEC 1 9 2000
	Please have the US EPA project leader fill out the customer survey form on the Region 5 Intranet: http://www.r5intra.epa.gov/crl/qa.html, ( by clicking on this link, or call George Schupp, CRL Sample Coordinator, at 3-1226).
	Please sign and date this form below and return it with any comments to:
٠	Sylvia Griffin  Data Management Coordinator  Region 5 Central Regional Laboratory  ML - 10C
	Received by and Date
	Comments:

# ENVIRONMENTAL PROTECTION AGENCY FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH Sufunt-um	SAMPLE DATE 11/15-16/2000 LAB	ARRIVAL DATE 1//7	100 DUE DATE 12/18/00
DU NUMBER 501020 DATA SET NUMBER 2000	STUDY HMCULAMOTIC PRIOR	RITY CONTI	TACTOR

CHL LOG NUMBER	SAMPLE DESCRIPTION		WATER VOLATILE ORGANICS SCAN UG/L TOX 17564		WATER ABN DILGANICS SCAN UG/I. TOX 17574		SEDIMENTS SOLIDS VOLATILE ONGANICS SCAN MG/KG (DRY) TOX 215622	SEDIMENTS SOLIDS ABN ORGANICS SCAN MG/KG (DRY) TOX 215722
ZUMSKULRU I	5-056876-877-878 METINDBUME	X						
2001 SKU1 ROZ	5-056873-874-875 1131 MAY BLANK	X						
211111 52111501	5-056851-860-561	X						
2001SKU1502	- 2m RUSGULL 445/mus	X						
2001SKUDUZ	5-056837-38-31-40-411-42-43 2100 RUSLIGO CALETAN 5-056831-832-833 DUPLINATOF SUZ	M		L				
2001 SKUISC 3	MW11645-056816-17-18	X	·					·
2001 SKU SOY	1014 5-056807-08-9	K						
2001SKUIRUI	1014 5-056807-08-09 METHER BLIME SUSG-			X				
<u> 2001 SKUISU i</u>	15 RUSWIL 5056804 5476834-835-836 25 Wil MS/MIN 5-056724 Durmm or 502			X		1		
2001SKUISUZ	37676534-835-836 265 Will MS/MIN			X				
2001 SKU1002	Durant or Su2			X		$\perp$		
LOUI SKUISUS	MW116A 5-056819	1		X		$\perp$		
WISKUISUY	1014 5-056812							
				$\int$				
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				T				
				T				

#### CASE NARRATIVE

DATE: December 18, 2000

PROJECT NAME: HIMCO LANDFILL - CRL Case #: 20010009

Analysis of Acid/Base/Neutrals

Organic Analytes (ABN)

ANALYST: Roger Rudinsky, Chemist &

REVIEWERS: Babu Paruchuri, Chemist 🕏

#### I. CASE DESCRIPTION:

The laboratory received 8 water samples from the subject site for ABN analysis. In addition to the routine target parameters, the laboratory analyzed the site samples for 2-hydroxybenzothiazole.

The samples were extracted by continuous liquid liquid and analyzed by GC/MS technique.

These samples were received at the laboratory in good condition.

#### II. INSTRUMENT QUALITY CONTROLS:

- 1. Instrument Performance Check: The samples were analyzed on December  $4^{\text{th}}$ ,  $15^{\text{th}}$  and  $16^{\text{th}}$ . IPCs using DFTPP were made on GC/MS to determine if EPA tuning criteria were met. The QC criteria are the same as those found in the Clean Water Act(CWA NPDES SOP).All ions were within specifications.
- 2. Initial Calibration Check: An acceptable five point initial calibration (IC) curve (QC Criteria for IC: RSD should be  $\leq$  35%) is required for all target compounds before samples can be analyzed. Two IC curves were generated to analyze the site samples.

The first initial calibration data collected on December  $4^{\text{th}}$  was acceptable for all of the compounds except hexachlorocyclopentadiene, 3-nitroaniline and 2,4-dinitrophenol.

Two calibration points were dropped for benzoic acid, and pentachlorophenol. One calibration point was dropped for carbazole and 4-nitrophenol.

The Reporting Limits were changed to reflect the change resulting from dropping points.

The second initial calibration data collected on December 15<sup>th</sup> was acceptable for 2-hydroxybenzothiazole.

3. <u>Continuing Calibration Check:</u> An acceptable continuing calibration (CC - QC Criteria for CC: %D should be < 20%) is required for all target compounds before samples can be analyzed. Four CC check standards were analyzed to analyze the site samples.

The first continuing calibration data file (1C120402) was acceptable for all of the compounds except benzoic acid.

The second continuing calibration data file (1C120417) was acceptable for all of the compounds except benzoic acid, hexachlorocyclopentadiene, 2,4-linitrophenol, 4-nitrophenol, pentachlorophenol and 3,3'-dichlorobenzidine.

The third and fourth continuing calibration data files were acceptable for 2-hydroxybenzothiazole.

# 4. Internal Standard (IS) Area and Retention Time Summary:

All samples met the internal standard (IS) area QC requirements. (QC Criteria for IS Area: internal standard areas of the samples should be - 50% to + 200% of the corresponding IS areas of the daily calibration standard).

All samples met the internal standard (IS) RT QC requirements.(QC Criteria for RT: RT of the IS compounds in the samples should be within 30 seconds of the daily calibration standard IS compounds).

### III. METHOD QUALITY CONTROL:

- 1. Method Blank Results: On the day of extraction, a Lab Blank (reagents spiked with surrogates) was extracted and analyzed to check the extraction apparatus and GC/MS systems for laboratory contamination (see Form I ABN). If TCLs were detected in the Method Blank samples, data for the affected batch of samples were qualified B(B = found in Method Blank) if the same TCLs were also detected in the site samples. The blank contained small amounts of di-n-butyl-phthalate and bis(2-Ethylhexyl)phthalate.
- 2. Surrogate Spike Compound Results: The surrogate spike compound recovery data that was outside the QC limits was

S1 for 2001SK01S04.

No corrective action is taken unless two or more of the surrogates are outside acceptance ranges. In addition two or more of the outliers must be from the same fraction acid or base/neutral for any data qualification to occur. When this happens all detects are flagged with a 'J' and all non-detects with a 'UJ'. The acid surrogates are S1,S2 and S5. In the case where one surrogate is high and one is low and both are from the same fraction only detected compounds are given the "J" flag.

#### 3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results:

2001SK01S02 was used for MS/MSDs for the water samples.

- 2-Chlorophenol had low recoveries for both MS and MSD. 4-Nitrophenol had high recoveries for both MS and MSD.
- For 4-Nitrophenol any positives for this compound will be qualified with a "J" flag.
- For 2-Chlorophenol any non-detects will be give a "UJ" flag in any sample.
- 2-Hydroxybenzothiazole had recoveries of 104% and 106% with a %RPD of 2% for the MS and MSD samples, respectively.
- 4. <u>Laboratory Control Sample (LCS):</u> On the day of extraction Laboratory Control Samples (LCS and LCS Duplicate) were extracted and analyzed with the site samples.

In keeping with the new QC plan this pair of samples was not used for any data qualification since the MS/MSD appears to be a good indicator of target compound recovery precision.

5. Performance Evaluation Sample (PES): Not applicable.

#### IV. SAMPLE RESULTS:

We have discovered that the GC/MS column we are using is not capable of separating 3-methylphenol and 4-methylphenol. We have ordered a new column that will be capable of this for future analysis.

.30300

We have noticed that the concentration of one of our surrogates Phenol-D5 in our standard mixes obtained from Supelco is greater now than in previous batches. The concentration of this surrogate in our standard mix is 85 ng/ul now. Previously the concentration was 50 ng/ul.

In almost all cases manual integration was performed for the following reasons:

- (1) The manual integration was performed because the entire compound peak area was not integrated by the software. The spectra of both before and after may or may not be identical depending on co-eluting peaks.
- (2) The software selected the wrong peak for integration.

  The manual integrations for the initial calibration standards will be found in the City of Pontiac package data set number 20010007.

In addition to the usual ABN target compounds we analyzed for 2-hydroxybenzothiazole. For this compound the laboratory has not yet conducted method validation studies. Therefore, the site sample data were qualified estimated UJ for non-detects and J for detects.

The laboratory generated data of acceptable quality.

# **CRL Data Review Qualification Codes**

QUALIFIER	DESCRIPTION
В	This flag is used when the analyte is found in the associated <u>B</u> lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
D	This flag is used when the analyte concentration results from a required $\underline{D}$ ilution of the sample, extract or digestate.
E	This flag is used to identify analyte concentrations <u>E</u> xceeding the upper calibration range of the analytical instrument after dilution of the sample, extract or digestate.  The reported value is considered to be estimated
J	This flag is used when the analyte is <u>estimated</u> due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. ( <u>J</u> is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
M	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL <u>Method Detection Limit (MDL)</u> but below the CRL reporting limit (RL). This flag applies to all values in this concentration range and indicates the quantitated value is <u>estimated</u> due to its presence in this concentration range.
N	This flag applies to GC/MS TeNtatively Identified Compounds (TICs) that have a mass spectral library match.
Q	This flag applies to analyte data that are severely estimated due to quality control and/or <b>Q</b> uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.
R	This flag applies to analyte data that are <u>Rejected</u> and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. <u>No value is reported with this qualification flag.</u>
U	This flag in used when the analyte was analyzed but <u>Undetected</u> in the sample. The CRL RL for the analyte accompanies this flag. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.



# 1B SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B BLANK WATER

Lab Name:	НІМСО	LANDF	ILL_	Contract:	ML-10C	B BLANK WATE
Lab Code:	USEPA	-R5	Case No.: 20010009	SAS No	o.: S	DG No.: GCMS026
Matrix: (soil/v	water)	WATE	R	La	b Sample ID:	MB BLANK WATE
Sample wt/vo	ol:	1000	(g/ml) ML	La	b File ID:	1C120420.D
Level: (low/r	med)	LOW		Da	ite Received:	
% Moisture:			decanted:(Y/N)	N Da	ite Extracted:	11/21/00
Concentrated	d Extract	Volume	: 1000 (uL)	Da	ite Analyzed:	12/05/00
njection Volu	ıme: <u>1</u>	.0(ul	-)	Dil	ution Factor:	1.0
SPC Cleanur	n: (V/NI)	NI.	nH·			

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
111-44-4	bis(2-Chloroethyl)ether		5	U
108-95-2	Phenol			
95-57-8	2-Chlorophenol		5	リテ
541-73-1	1,3-Dichlorobenzene		5	U
106-46-7	1,4-Dichlorobenzene		5	U
95-50-1	1,2-Dichlorobenzene		5	. U
100-51-6	Benzyl alcohol		5	٠U
95-48-7	2-Methylphenol		5	U
106-44-5	4-Methylphenol		5	U
108-60-1	bis(2-chloroisopropyl)etl	ner	5	<u> </u>
67-72-1	Hexachloroethane		5	U
621-64-7	N-Nitroso-di-n-propylam	ine	5	U
98-95-3	Nitrobenzene		5	U
78-59-1	Isophorone		5	U
88-75-5	2-Nitrophenol		5	U
105-67-9	2,4-Dimethylphenol		5	U
65-80-0	Benzoic acid		25	ロブ
111-91-1	bis(2-Chloroethoxy)metl	nane	5	U
120-83-2	2,4-Dichlorophenol		5	U
120-82-1	1,2,4-Trichlorobenzene		5	U
91-20-3	Naphthalene		5	U
106-47-8	4-Chloroaniline		5	U
87-68-3	Hexachlorobutadiene		5	Ū
59-50-7	4-Chloro-3-methylpheno	ol	5	U
91-57-6	2-Methylnaphthalene		5	U
- 77-47-4	Hexachlorocyclopentad	iene -	25	UTI
88-06-2	2,4,6-Trichlorophenol		5	U
95-95-4	2,4,5-Trichlorophenol		5	U
91-58-7	2-Chloronaphthalene		5	U
88-74-4	2-Nitroaniline		5	U
208-96-8	Acenaphthylene		5	U
131-11-3	Dimethylphthalate		5	U
606-20-2	2,6-Dinitrotoluene		5	U
83-32-9	Acenaphthene		5	υ
99-09-2	3-Nitroaniline		25	UJ
51-28-5	2,4-Dinitrophenol		25	UJ
132-64-9	Dibenzofuran		_5	U

# 1C SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B BLANK WATER

Lab Name:	HIMCO LA	NDFILL		Contract:	ML-10C	
Lab Code:	USEPA-R	5 Case N	o.: 2001000	9 SAS No	o.: S	DG No.: GCMS026
Matrix: (soil/w	vater) V	VATER		La	b Sample ID:	MB BLANK WATE
Sample wt/vo	oi: 1	000 (g/	ml) ML	La	b File ID:	1C120420.D
Level: (low/m	ned) L	OW		Da	ite Received:	
% Moisture:		decante	ed:(Y/N)	N Da	te Extracted:	11/21/00
Concentrated	Extract Vo	lume: 1000	(uL)	Da	te Analyzed:	12/05/00
Injection Volu	me: 1.0	(uL)		Dil	ution Factor:	1.0

pH:

GPC Cleanup: (Y/N)

CAS NO.	AS NO. COMPOUND		UG/L	Q
121-14-2	2,4-Dinitrotoluene	1	5	U
100-02-7	4-Nitrophenol		25	UJ
86-73-7	Fluorene		5	U
7005-72-3	4-Chlorophenyl-phenylether		5	U
84-66-2	Diethylphthalate		5	U
100-01-6	4-Nitroaniline		25	U
534-52-1	4,6-Dinitro-2-methylphenol		25	U
86-30-6	n-Nitrosodiphenylamine		5	U
101-55-3	4-Bromophenyl-phenylether		5	UU
118-74-1	Hexachlorobenzene		5	U
87-86-5	Pentachlorophenol		25	UJ
85-01-8	Phenanthrene		5	Ų
120-12-7	Anthracene		5	U
86-74-8	Carbazole		5	U
84-74-2	Di-n-butylphthalate		4	8 M
206-44-0	Fluoranthene		5	U
129-00-0	Pyrene			U
85-68-7	Butylbenzylphthalate		<u> </u>	U
91-94-1	3,3'-Dichlorobenzidine		25	リブ
56-55-3	Benzo[a]anthracene		5	U
218-01-9	Chrysene		5	U
117-81-7	bis(2-Ethylhexyl)phthalate		3	J-M
117-84-0	Di-n-octylphthalate		5	U
205-99-2	Benzo[b]fluoranthene		5	U
207-08-9	Benzo[k]fluoranthene		5	U
50-32-8	Benzo[a]pyrene		_ 5	U
193-39-5_	Indeno[1,2,3-cd]pyrene		5	U
53-70-3	Dibenz[a,h]anthracene		5	U
191-24-2	Benzo[g,h,i]perylene		5	U
	2-HYDROXY BENZOTH	PZOLE	/0	シェ

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO. TENTATIVELY IDENTIFIED COMPOUNDS

B BLANK	WATER
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Lab Name:	HIMCO	LANDFI	LL			ntract: ML-10	<u> </u>	<del></del>
Lab Code:	USEPA	-R5	Case No.:	200100	09	SAS No.:	SDG No.	: GCMS026
Matrix: (soil/v	vater)	WATER	₹			Lab Samp	le ID: MB BL	ANK WATE
Sample wt/vo	ol:	1000	(g/ml)	ML		Lab File I	D: 1C120	420.D
l.evel: (low/n	ned)	LOW		-		Date Rece	eived:	
% Moisture:		d	lecanted: (	Y/N)	N	Date Extra	cted: 11/21/0	00
Concentrated	Extract	Volume:	1000	(uL)		Date Analy	/zed: 12/05/0	00
Injection Volu	me: <u>1.0</u>	(uL	)			Dilution Fa	ctor: 1.0	
GPC Cleanup	o: (Y/N)	N	pH:					
					CON	<b>ICENTRATION</b>	V UNITS:	
Number TICs	found:	0			(ug/	L or ug/Kg)	UG/L	
CAS NUMB	ER	СОМР	OUND NAI	ME		RT	EST. CON	C. Q

# 1B SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

R01 WATER

Lab Name:	HIMCO LAN	DFILL	Contract:	ML-10C	KOTWATER
Lab Code:	USEPA-R5	Case No.: 200	010009 SAS No	o.: St	DG No.: GCMS026
Matrix: (soil/	water) WA	TER	La	b Sample ID:	R01 WATER
Sample wt/ve	ol: 105	0(g/ml) M	LLa	b File ID:	1C120423.D
Level: (low/r	med) LOV	<u>V</u>	Da	te Received:	
% Moisture:		decanted:(Y/N	) N Da	te Extracted:	11/21/00
Concentrated	d Extract Volur	ne: 1000 (uL	) Da	te Analyzed:	12/05/00
Injection Volu	ıme: <u>1.0</u>	(uL)	Dili	ution Factor:	1.0
GPC Cleanur	n: (V/N)	N nH·			

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
111-44-4	bis(2-Chloroethyl)ether		5	
108-95-2	Phenol		5	U
95-57-8	2-Chlorophenol		5	UJ
541-73-1	1,3-Dichlorobenzene		5	U
106-46-7	1,4-Dichlorobenzene	<del></del>	5	U
95-50-1	1,2-Dichlorobenzene		5	Ū
100-51-6	Benzyl alcohol		5	υ
95-48-7	2-Methylphenol		5	U
106-44-5	4-Methylphenoi		5	U
108-60-1	bis(2-chloroisopropyl)ethe	٢	5	U
67-72-1	Hexachloroethane		. 5	U
621-64-7	N-Nitroso-di-n-propylamine	e	5	U
98-95-3	Nitrobenzene		5	Ü
78-59-1	Isophorone		5	U
88-75-5	2-Nitrophenol		5	U
105-67-9	2,4-Dimethylphenol		5	Ū
65-80-0	Benzoic acid		24	UJ
111-91-1	bis(2-Chloroethoxy)metha	ne .	5	U
120-83-2	2,4-Dichlorophenol		5	Ū
120-82-1	1,2,4-Trichlorobenzene		5	U
91-20-3	Naphthalene		5	U
106-47-8	4-Chloroaniline		5	U
87-68-3	Hexachlorobutadiene		5	U
59-50-7	4-Chloro-3-methylphenol		5	U
91-57-6	2-Methylnaphthalene		5	U
77-47-4	Hexachlorocyclopentadier	ne	24	UJ
88-06-2	2,4,6-Trichlorophenol		5	U
95-95-4	2,4,5-Trichlorophenol		5	U
91-58-7	2-Chloronaphthalene		5	U
88-74-4	2-Nitroaniline		5	U
208-96-8	Acenaphthylene		5	U
131-11-3	Dimethylphthalate		5	U
606-20-2	2,6-Dinitrotoluene		5	U
83-32-9	Acenaphthene		5	U
99-09-2	3-Nitroaniline		24	UJ
51-28-5	2,4-Dinitrophenol		24	UJ
132-64-9	Dibenzofuran		5	U

# 1C SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

**R01 WATER** 

Lab Name:	HIMCO	LANDE	!L <u>L</u>		Contra	ct: ML-1	0C	L	
Lab Code:	USEPA	-R5	Case No.:	20010009	SAS	No.:	SC	G No.:	GCMS026
Matrix: (soil/v	water)	WATE	R			Lab Sam	ple ID:	R01 WA	TER
Sample wt/vo	ol:	1050	(g/ml)	ML		Lab File	D:	1C1204	23.D
Level: (low/r	med)	LOW				Date Red	eived:		
% Moisture:			decanted:(`	Y/N)N	<b>!</b>	Date Extr	acted:	11/21/00	)
Concentrated	d Extract	Volume:	1000	(uL)		Date Ana	lyzed: 1	12/05/00	)
Injection Volu	ıme: <u>1</u> .	<u>0</u> (uL	.)			Dilution F	actor: 1	1.0	
GPC Cleanup	o: (Y/N)	N	pH:						

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
121-14-2	2,4-Dinitrotoluene		5	U
100-02-7	4-Nitrophenol		24	UJ
86-73-7	Fluorene		5	U
7005-72-3	4-Chlorophenyl-phenylethe	r	5	U
84-66-2	Diethylphthalate		5	U
100-01-6	4-Nitroaniline		24	U
534-52-1	4,6-Dinitro-2-methylphenol		24	U
86-30-6	n-Nitrosodiphenylamine		5	U
101-55-3	4-Bromophenyl-phenylether	r	5	U
118-74-1	Hexachlorobenzene		5	U
87-86-5	Pentachlorophenol		24	$U\mathcal{F}$
85-01-8	Phenanthrene		5	U
120-12-7	Anthracene		. 5	U
86-74-8	Carbazole		5	U
84-74-2	Di-n-butylphthalate		3	AB M
206-44-0	Fluoranthene		5	U
129-00-0	Pyrene		5	U
85-68-7	Butylbenzylphthalate		5	U
91-94-1	3,3'-Dichlorobenzidine		24	ロテ
56-55-3	Benzo[a]anthracene		5	U
218-01-9	Chrysene		5	U
117-81-7	bis(2-Ethylhexyl)phthalate		3	∌B M
117-84-0	Di-n-octylphthalate		5	U
205-99-2	Benzo[b]fluoranthene		5	U
207-08-9	Benzo[k]fluoranthene		5	U
50-32-8	Benzo[a]pyrene		5	U .
193-39-5	Indeno[1,2,3-cd]pyrene	-	5	U
53-70-3	Dibenz[a,h]anthracene		5	U
191-24-2	Benzo[g,h,i]perylene		5	U
	2-HYDROXY BENZOT	TH, AZOLE	10	レブ

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

R01 WATER

Lab Name:	HIMCO	LANDFI	LL		Contrac	ct: ML-	10C	_		
Lab Code:	USEPA	-R5	Case No.:	20010009	SAS	No.:	S	DG No.:	GCMS	S026
Matrix: (soil/	water)	WATER	₹			Lab Sar	nple ID:	R01 W	TER	
Sample wt/vo	ol:	1050	(g/ml)	ML	_	Lab File	ID:	1C1204	23.D	
Level: (low/r	ned)	LOW	<del></del>			Date Re	ceived:			
% Moisture:		d	ecanted: (`	Y/N)1	1 1	Date Ex	tracted:	11/21/00	)	
Concentrated	d Extract	Volume:	1000	(uL)	Į	Date An	alyzed:	12/05/00	)	
Injection Volu	ıme: <u>1.</u> (	0 (uL)	)		Ţ	Dilution	Factor:	1.0		-
GPC Cleanup	p: (Y/N)	<u>N</u>	_ pH:							
					CONCE	NTRATI	ON UNI	TS:		
Number TICs	found:	0			(ug/L or ı	ug/Kg)	UG/	L <sub>.</sub>		
CAS NUMB	ER	COMP	IAN DNUC	ΜE		RT	ES	T. CONC	<b>.</b>	Q

# 1B SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

**S01 WATER** 

HIMCO LANDFILL Contract: ML-10C Lab Name: SAS No.: SDG No.: GCMS026 Lab Code: USEPA-R5 Case No.: 20010009 Lab Sample ID: S01 WATER Matrix: (soil/water) WATER 1050 Lab File ID: 1C120424.D Sample wt/vol: (g/ml) ML Level: (low/med) LOW Date Received: Date Extracted: 11/21/00 % Moisture: decanted:(Y/N) Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/05/00 Dilution Factor: 1.0 Injection Volume: 1.0 (uL) <u>N</u> .\_\_\_

pH:

GPC Cleanup: (Y/N)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
111-44-4	bis(2-Chloroethyl)eth	er	5	U
108-95-2	Phenol		5	Ú
95-57-8	2-Chlorophenol		5	UJ
541-73-1	1,3-Dichlorobenzene		5	U
106-46-7	1,4-Dichlorobenzene		5	U
95-50-1	1,2-Dichlorobenzene		5	U
100-51-6	Benzyl alcohol		5	U
95-48-7	2-Methylphenol		5	U
106-44-5	4-Methylphenol		5	U
108-60-1	bis(2-chloroisopropyl)	ether	5	U
67-72-1	Hexachloroethane		5	U
621-64-7	N-Nitroso-di-n-propyl	amine	5	U
98-95-3	Nitrobenzene		5	Ų
78-59-1	Isophorone		5	Ų
88-75-5	2-Nitrophenol		5	<u> </u>
105-67-9	2,4-Dimethylphenol		5	U
65-80-0	Benzoic acid		24	$\cup$ $\mathcal J$
111-91-1	bis(2-Chloroethoxy)m	ethane	5	U
120-83-2	2,4-Dichlorophenol		5	U
120-82-1	1,2,4-Trichlorobenzer	ne	5	U
91-20-3	Naphthalene		5	U
106-47-8	4-Chloroaniline		5	U
87-68-3	Hexachlorobutadiene		5	<b>U</b>
59-50-7	4-Chloro-3-methylphe		5	U
91-57-6	2-Methylnaphthalene		5	U
77-47-4	Hexachlorocyclopent		24	リブ
88-06-2	2,4,6-Trichlorophenol		5	U
95-95-4	2,4,5-Trichlorophenol		<u>5</u>	U
91-58-7	2-Chloronaphthalene		5	U
88-74-4	2-Nitroaniline			U
208-96-8	Acenaphthylene		5	U
131-11-3	Dimethylphthalate			<u>_U</u> _
606-20-2	2,6-Dinitrotoluene		_ 5	U
83-32-9	Acenaphthene		5	U
99-09-2	3-Nitroaniline		24	UJ
51-28-5	2,4-Dinitrophenol	The state of the s	24	UJ
132-64-9	Dibenzofuran		5	U

# 1C SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S01 WATER

Lab Name:	HIMCO L	ANDFI	LL <u></u> _		Contract:	ML-10C		
Lab Code:	USEPA-F	R5	Case No.: 20010	0009	SAS No	).;	SDG No.:	GCMS026
Matrix: (soil/w	vater) \	WATER	₹		Lai	o Sample ID	): S01 WA	ATER
Sample wt/vo	of:	1050	(g/ml) ML		Lai	o File ID:	1C1204	24.D
Level: (low/m	ned) l	_OW			Da	te Received	l:	
% Moisture:			decanted:(Y/N)	- N	Da	te Extracted	1: 11/21/0	0
Concentrated	Extract V	olume:	1000 (uL)		Da	te Analyzed	12/05/00	0
Injection Volu	me: 1.0	(uL	)		Dile	ution Factor:	1.0	
GPC Cleanup	): (Y/N)	N	pH:	-				

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
121-14-2	2,4-Dinitrotoluene		5	
100-02-7	4-Nitrophenol		24	UJ
86-73-7	Fluorene		5	U
7005-72-3	4-Chlorophenyl-phenylether		5	U
84-66-2	Diethylphthalate		5	Ū
100-01-6	4-Nitroaniline		24	U
534-52-1	4,6-Dinitro-2-methylphenol		24	U
86-30-6	n-Nitrosodiphenylamine		5	U
101-55-3	4-Bromophenyl-phenylether		5	Ū
118-74-1	Hexachlorobenzene		5	U
87-86-5	Pentachlorophenol		24	リナ
85-01-8	Phenanthrene		5	Ū
120-12-7	Anthracene		5_	U
86-74-8	Carbazole		5	U
84-74-2	Di-n-butylphthalate		4	JB M
206-44-0	Fluoranthene		5	Ū
129-00-0	Pyrene		5	U
85-68-7	Butylbenzylphthalate		5	U
91-94-1	3,3'-Dichlorobenzidine		24	リブ
56-55-3	Benzo[a]anthracene		5	U
218-01-9	Chrysene		5	U
117-81-7	bis(2-Ethylhexyl)phthalate		. 5	U
117-84-0	Di-n-octylphthalate	_	5	U
205-99-2	Benzo[b]fluoranthene		5	U
207-08-9	Benzo[k]fluoranthene		_5_	U
50-32-8	Benzo[a]pyrene		5	U .
193-39-5	Indeno[1,2,3-cd]pyrene		5	U
53-70-3	Dibenz[a,h]anthracene		5	U
191-24-2	Benzo[g,h,i]perylene		5	Ū
	7-HYDROXY BENZOTI	410201	/0	・・シェ

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name:	німсо	LANDFIL	_L	С	Contrac	t: ML	-10C	501	WAIER
Lab Code:	USEPA	-R5 (	Case No.: 20010	0009	SAS	No.:	s	DG No.: (	GCMS026
Matrix: (soil/v	water)	WATER			Ĺ	ab Sa	mple ID:	S01 WAT	ER
Sample wt/vo	ol:	1050	(g/ml) ML		L	.ab File	e ID:	1C120424	1.D
Level: (low/n	ned)	LOW			ם	Date Re	eceived:		
% Moisture:		d	ecanted: (Y/N)	N		Date Ex	ktracted:	11/21/00	
Concentrated	d Extract	Volume:	1000 (uL)			ate Ar	nalyzed:	12/05/00	
Injection Volu	ıme: <u>1.0</u>	) (uL)				ilution	Factor:	1.0	
GPC Cleanup	o: (Y/N)	N	pH:						
				CC	ONCEN	ITRAT	ION UNIT	ΓS:	
Number TICs	found:	0		(นดู	g/L or u	g/Kg)	UG/l	-	
CAS NUMB	ΕĐ	COMPO	NIND NAME			RΤ	FS.	T CONC	0

### 1B SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

**S02 WATER** 

Lab Name: HIMCO LANDFILL Contract: ML-10C Lab Code: USEPA-R5 SAS No.: SDG No.: GCMS026 Case No.: 20010009 Matrix: (soil/water) WATER Lab Sample ID: S02 WATER Sample wt/vol: 1020 (g/ml) ML Lab File ID: 1C120425.D Level: (low/med) LOW Date Received: Date Extracted: 11/21/00 % Moisture: decanted:(Y/N) Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/05/00 Injection Volume: Dilution Factor: 1.0 1.0 (uL)

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
111-44-4	bis(2-Chloroethyl)ethe	<del></del>	5	U
108-95-2	Phenol		5	U
95-57-8	2-Chlorophenol		5	UJ
541-73-1	1,3-Dichlorobenzene		5	U
106-46-7	1,4-Dichlorobenzene		5	U
95-50-1	1,2-Dichlorobenzene		5	U
100-51-6	Benzyl alcohol		5	U
95-48-7	2-Methylphenol		5	U
106-44-5	4-Methylphenol		5	U
108-60-1	bis(2-chloroisopropyl)	ethe <u>r</u>	5	U
67-72-1	Hexachloroethane		5	U
621-64-7	N-Nitroso-di-n-propyla	mine	5	U
98-95-3	Nitrobenzene	<u></u>	5	U
78-59-1	Isophorone		5	U
88-75-5	2-Nitrophenol		5	U
105-67-9	2,4-Dimethylphenol		5	U
65-80-0	Benzoic acid		25	υJ
111-91-1	bis(2-Chloroethoxy)me	ethane	5	U
120-83-2	2,4-Dichlorophenol		5	U
120-82-1	1,2,4-Trichlorobenzen	e	5	U
91-20-3	Naphthalene		5	U
106-47-8	4-Chloroaniline		5	U
87-68-3	Hexachlorobutadiene		5	U
59-50-7	4-Chloro-3-methylpher	nol	5	U
91-57-6	2-Methylnaphthalene		5	U
77-47-4	Hexachlorocyclopenta	diene	25	リブ
88-06-2	2,4,6-Trichlorophenol		5	U
95-95-4	2,4,5-Trichlorophenol		5	U
91-58-7	2-Chloronaphthalene		5	U
88-74-4	2-Nitroaniline		5	U
208-96-8	Acenaphthylene		5	U
131-11-3	Dimethylphthalate		5	U
606-20-2	2,6-Dinitrotoluene		5	U
83-32-9	Acenaphthene		5	U
99-09-2	3-Nitroaniline		25	UJ
51-28-5	2,4-Dinitrophenol		25	UJ
132-64-9	Dibenzofuran		5	U

# 1C SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S02 WATER

Lab Name:	HIMCO L	ANDF	LL		Contract:	ML-10C	<u> </u>	
Lab Code:	USEPA-R	15	Case No.:	20010009	9 SÀS No	o.: S	SDG No.:	GCMS026
Matrix: (soil/v	vater) \	VATE	3		La	b Sample ID:	S02 WA	TER
Sample wt/vo	ol: 1	020	(g/ml)	ML	La	b File ID:	1C1204	25.D
Level: (low/n	ned) <u>L</u>	.OW			Da	te Received:		
% Moisture:		-	decanted:(	Y/N)f	N Da	te Extracted:	11/21/00	)
Concentrated	Extract Vo	olume:	1000	(uL)	Da	te Analyzed:	12/05/00	)
Injection Volu	me: <u>1.0</u>	(uL	)		Dile	ution Factor:	1.0	
GPC Cleanup	o: (Y/N)	N	pH:					

CAS NO.	COMPOUND (ug/L	or ug/Kg)	UG/L	Q
121-14-2	2,4-Dinitrotoluene		5	 U
100-02-7	4-Nitrophenol		25	UJ
86-73-7	Fluorene		5	U
7005-72-3	4-Chlorophenyl-phenylether		5	U
84-66-2	Diethylphthalate		5	U
100-01-6	4-Nitroaniline		25	· U .
534-52-1	4,6-Dinitro-2-methylphenol		25	U
86-30-6	n-Nitrosodiphenylamine		5	UU
101-55-3	4-Bromophenyl-phenylether		5	U
118-74-1	Hexachlorobenzene		5	U
87-86-5	Pentachiorophenol		25	$\mathcal{J}$ U $\mathcal{J}$
85-01-8	Phenanthrene		5	U
120-12-7	Anthracene		5	U
86-74-8	Carbazole		5	_ <u>U</u>
84-74-2	Di-n-butylphthalate		5	U
206-44-0	Fluoranthene		5	U
129-00-0	Pyrene		5	U
85-68-7	Butylbenzylphthalate		5	U
91-94-1	3,3'-Dichlorobenzidine		25	UJ
56-55-3	Benzo[a]anthracene		5	U
218-01-9	Chrysene		5	U
117-81-7	bis(2-Ethylhexyl)phthalate	2	3	J M
117-84-0	Di-n-octylphthalate	2	5	Ú
205-99-2	Benzo[b]fluoranthene		5	U
207-08-9	Benzo[k]fluoranthene		5	U
50-32-8	Benzo[a]pyrene	1	5	U ·
193-39-5	Indeno[1,2,3-cd]pyrene		5	U
53-70-3	Dibenz[a,h]anthracene		5	U
191-24-2	Benzo[g,h,i]perylene		5	U
	2-HYDROXY BENZO THIN	9261E	10	UJ

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET EPA SAMPLE NO. TENTATIVELY IDENTIFIED COMPOUNDS

S02 WATER

Lab Name:	HIMCO	LANDE	ILL		Contract: ML-	10C				
Lab Code:	USEPA	USEPA-R5 Case No.: 200			009 SAS No.: SD			GCMS026		
Matrix: (soil/water) WAT		WATE	R		Lab Sar	nple ID: \$	S02 WA	TER		
Sample wt/v	ol:	1020	(g/ml) ML		Lab File	ID:	1C1204:	25.D		
Level: (low/med)		LOW			Date Re	eceived:	=			
% Moisture:			decanted: (Y/N)	N	Date Ex	tracted: 1	11/21/00	)		
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/05/00										
Injection Volu	ume: 1.	_)	Dilution Factor: 1.0							
GPC Cleanu	p: (Y/N)	N	pH:	_						
					CONCENTRATION UNITS:					
Number TICs	s found:	0		(u	g/L or ug/Kg)	UG/L				
CAS NUME	BER	СОМЕ	POUND NAME		RT	EST	. CONC	. Q		

#### 1B SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA CAMPLE NO.

**D02 WATER** 

Lab Name: HIMCO LANDFILL Contract: ML-10C Lab Code: USEPA-R5 Case No.: 20010009 SAS No.: SDG No.: GCMS026 Matrix: (soil/water) WATER Lab Sample ID: D02 WATER 1030 Lab File ID: Sample wt/vol: (g/ml) ML 1C120428.D Level: (low/med) LOW Date Received: % Moisture: decanted:(Y/N) Date Extracted: 11/21/00 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/05/00 Dilution Factor: 1.0 Injection Volume: 1.0 (uL) GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
111-44-4	bis(2-Chloroethyl)ether		5	U
108-95-2	Phenol		5	Ū
95-57-8	2-Chlorophenol		5	UJ
541-73-1	1,3-Dichlorobenzene		5	Ū
106-46-7	1,4-Dichlorobenzene		5	U
95-50-1	1,2-Dichlorobenzene		5	U
100-51-6	Benzyl alcohol		5	U
95-48-7	2-Methylphenol		5	U
106-44-5	4-Methylphenol		5	U
108-60-1	bis(2-chloroisopropyl)eth	her	5	Ū
67-72-1	Hexachloroethane		5	U
621-64-7	N-Nitroso-di-n-propylam	ine	5	U
98-95-3	Nitrobenzene		5	U
78-59-1	Isophorone		5	U
88-75-5	2-Nitrophenol		5	U
105-67-9	2,4-Dimethylphenol		5	U
65-80-0	Benzoic acid		24	UJ
111-91-1	bis(2-Chloroethoxy)meth	nane	5	U
120-83-2	2,4-Dichlorophenol		5	U
120-82-1	1,2,4-Trichlorobenzene		5	U
91-20-3	Naphthalene		5	U
106-47-8	4-Chloroaniline		5	Ū
87-68-3	Hexachlorobutadiene		5	U
59-50-7	4-Chloro-3-methylpheno	ol	5	Ū
91-57-6	2-Methylnaphthalene		5	U
77-47-4 ·	Hexachlorocyclopentadi	ene	- 24	Uブ
88-06-2	2,4,6-Trichlorophenol		5	Ü
95-95-4	2,4,5-Trichlorophenol		5	U
91-58-7	2-Chloronaphthalene		5	U
88-74-4	2-Nitroaniline		5	Ū
208-96-8	Acenaphthylene		5	U
131-11-3	Dimethylphthalate		5	U
606-20-2	2,6-Dinitrotoluene		5	U
83-32-9	Acenaphthene		5	Ū
99-09-2	3-Nitroaniline		24	UJ
51-28-5	2,4-Dinitrophenol	-	24	υJ
132-64-9	Dibenzofuran		5	U

### 1C SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

D02 WATER

Lab Name:	HIMCO L	LANDFII	_L		Contract:	ML-10C	<u></u>
Lab Code:	USEPA-I	R5	Case No.:	20010009	SAS N	o.: S	DG No.: GCMS026
Matrix: (soil/w	vater)	WATER	2		La	b Sample ID:	D02 WATER
Sample wt/vo	oi: ·	1030	(g/ml)	ML	La	b File ID:	1C120428.D
Level: (low/m	ned)	LOW			Da	ate Received:	
% Moisture:			decanted:(`	Y/N) <u>1</u>	J Da	ate Extracted:	11/21/00
Concentrated	Extract \	/olume:	1000	(uL)	Da	ite Analyzed:	12/05/00
Injection Volu	me: 1 <u>.0</u>	(uL)	ļ.,		Dil	ution Factor:	1.0
GPC Cleanup	o: (Y/N)	N	pH: _	··· <u> </u>			

# **CONCENTRATION UNITS:**

040410	00110011110	- // // // //		
CAS NO.	COMPOUND (u	g/L or ug/Kg)	UG/L	Q
121-14-2	2,4-Dinitrotoluene		5	
100-02-7	4-Nitrophenol		24	UJ
86-73-7	Fluorene		5	Ú
7005-72-3	4-Chlorophenyl-phenylether		5	Ü
84-66-2	Diethylphthalate		5	U
100-01-6	4-Nitroaniline		24	U
534-52-1	4,6-Dinitro-2-methylphenol		24	U
86-30-6	n-Nitrosodiphenylamine		5	U
101-55-3	4-Bromophenyl-phenylether		5	U
118-74-1	Hexachlorobenzene		5	U
87-86-5	Pentachlorophenol		24	U ブ
85-01-8	Phenanthrene		5	U
120-12-7	Anthracene		5	U
86-74-8	Carbazole		5	U
84-74-2	Di-n-butylphthalate		14	В
206-44-0	Fluoranthene		5	Ū
129-00-0	Pyrene		5	U
85-68-7	Butylbenzylphthalate		5	U
91-94-1	3,3'-Dichlorobenzidine		24	UJ
56-55-3	Benzo[a]anthracene		5	U
218-01-9	Chrysene		5	υ
117-81-7	bis(2-Ethylhexyl)phthalate		3	ØB M
117-84-0	Di-n-octylphthalate		5	ĺΰ
205-99-2	Benzo[b]fluoranthene		5	U
207-08-9	Benzo[k]fluoranthene		5	U
50-32-8,	. Benzo[a]pyręne	23	5	U -
193-39-5	Indeno[1,2,3-cd]pyrene		5	U
53-70-3	Dibenz[a,h]anthracene	**	5	Ū
191-24-2	Benzo[g,h,i]perylene		5	Ū
	2-HYD COXY BENZO T	HIN ZULE	10	レゴ

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# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

D02 WATER

Lab Name: HIMCO LANDFILL Contract: ML-10C Lab Code: USEPA-R5 Case No.: 20010009 SAS No.: SDG No.: GCMS026 Matrix: (soil/water) WATER Lab Sample ID: D02 WATER Sample wt/vol: 1030 (g/mi) ML Lab File ID: 1C120428.D Date Received: Level: (low/med) LOW Date Extracted: 11/21/00 % Moisture: decanted: (Y/N) Ν Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/05/00 Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

#### CONCENTRATION UNITS:

Number TICs found: 17 (ug/L or ug/Kg) UG/L

CA	S NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown hydrocarbon	18.56	8	J
2.		unknown	19.01	9	J
3.		unknown	22.57	8	J
4.		unknown	22.89	6	J
5.		unknown	25.52	21	J
6.		unknown	25.67	17	J
7.		unknown	26.14	17	J
8.	000630-04-6	Hentriacontane (CAS) \$\$ Untriac	28.54	26	JN
9.		unknown	30.24	23	J
10.		unknown	30.37	23	J
11.		unknown hydrocarbon	30.69	33	J
12.		unknown	30.87	11	J
13.		unknown hydrocarbon	31.48	16	J
14.		unknown hydrocarbon	32.35	13	J
15.		unknown	32.88	7	
16.		unknown hydrocarbon	33.34	9	J
17.	055401-55-3	Docosane, 11-decyl- (CAS) \$\$ 11	34.50	6	JN

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

**S03 WATER** 

HIMCO LANDFILL Contract: ML-10C Lab Name: USEPA-R5 Case No.: 20010009 SAS No.: Lab Code:

SDG No.: GCMS026

Matrix: (soil/water) WATER Lab Sample ID: S03 WATER

Sample wt/vol: 1060 (g/ml) ML Lab File ID: 1C120429.D

Level: (low/med) LOW Date Received:

pH:

GPC Cleanup: (Y/N)

% Moisture: Date Extracted: 11/21/00 decanted:(Y/N) Ν

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/05/00

Dilution Factor: 1.0 Injection Volume: 1.0 (uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
111-44-4	bis(2-Chloroethyl)ether		5	U
108-95-2	Phenol		5	U
95-57-8	2-Chlorophenol		5	U .J
541-73-1	1,3-Dichlorobenzene		5	Ū
106-46-7	1,4-Dichlorobenzene		5	U
95-50-1	1,2-Dichlorobenzene		5	U
100-51-6	Benzyl alcohol		5	U
95-48-7	2-Methylphenol		5	Ū
106-44-5	4-Methylphenol		5	U
108-60-1	bis(2-chloroisopropyl)ethe	er	5	Ų
67-72-1	Hexachloroethane		5	U
621-64-7	N-Nitroso-di-n-propylamir	ne	5	υ
98-95-3	Nitrobenzene		5	U
78-59-1	Isophorone		5	U
88-75-5	2-Nitrophenol	•	5	U
105-67-9	2,4-Dimethylphenol		5	U
65-80-0	Benzoic acid		24	U.T
111-91-1	bis(2-Chloroethoxy)metha	ane	5	υŬ
120-83-2	2,4-Dichlorophenol		5	U
120-82-1	1,2,4-Trichlorobenzene		5	U
91-20-3	Naphthalene		5	U
106-47-8	4-Chloroaniline		5	U
87-68-3	Hexachlorobutadiene		5	U
59-50-7	4-Chloro-3-methylphenol		5	U
91-57-6	2-Methylnaphthalene		5	U
77-47-4	Hexachlorocyclopentadie	ne	24	$\cup \mathcal{T}$
88-06-2	2,4,6-Trichlorophenol		5	U
95-95-4	2,4,5-Trichlorophenol		5	U
91-58-7	2-Chloronaphthalene		5	U
88-74-4	2-Nitroaniline		5	U
208-96-8	Acenaphthylene		5	U
131-11-3	Dimethylphthalate		5	U
606-20-2	2,6-Dinitrotoluene		5	U
83-32-9	Acenaphthene		5	Ū
99-09-2	3-Nitroaniline		24	UJ
51-28-5	2,4-Dinitrophenol	•	24	UJ
132-64-9	Dibenzofuran		5	Ü

# 1C SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

S03 WATER

Lab Name:	Name: HIMCO LANDFILL				Contract: ML-10			
Lab Code:	USEP	4-R5	Case No.: 20010	009	SAS No.:	SDG	No.:	GCMS026
Matrix: (soil/	water)	WATE	R		Lab Sampl	e ID: SC	TAW EC	TER
Sample wt/v	ol:	1060	(g/ml) ML		Lab File ID	: 10	12042	9.D
Level: (low/r	med)	LOW			Date Rece	ived:		
% Moisture:			decanted:(Y/N)	N	Date Extra	cted: 11	/21/00	
Concentrate	d Extrac	t Volume	: 1000 (uL)		Date Analy	zed: 12	/05/00	
Injection Vol	ume:	1.0 (ul	_)		Dilution Fac	ctor: 1.0	)_	
GPC Cleanu	p: (Y/N)	Ν	pH:					

#### CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
121-14-2	2,4-Dinitrotoluene	***************************************	5	· - · · · · · · · · · · · · · · · ·
100-02-7	4-Nitrophenol		24	リブ
86-73-7	Fluorene		5	U
7005-72-3	4-Chlorophenyl-phenyleth	er	5	Ū
84-66-2	Diethylphthalate		5	U
100-01-6	4-Nitroaniline		24	. U
534-52-1	4,6-Dinitro-2-methylpheno	)l	24	U
86-30-6	n-Nitrosodiphenylamine		5_	U
101-55-3	4-Bromophenyl-phenyleth	er	5	U
118-74-1	Hexachlorobenzene		5	U
87-86-5	Pentachlorophenol		24	UJ
85-01-8	Phenanthrene		5	U
120-12-7	Anthracene		5	<u>.</u> U
86-74-8	Carbazole		5	U
84-74-2	Di-n-butylphthalate		4	∠β M
206-44-0	Fluoranthene		5	U
129-00-0	Pyrene		5	U
85-68-7	Butylbenzylphthalate		5	U
91-94-1	3,3'-Dichlorobenzidine		24	リブ
56-55-3	Benzo[a]anthracene		5	U
218-01-9	Chrysene		5	U
117-81-7	bis(2-Ethylhexyl)phthalate		5	U
117-84-0	Di-n-octylphthalate		5	U
205-99-2	Benzo[b]fluoranthene		5	υ
207-08-9	Benzo[k]fluoranthene		5	U
50-32-8	Benzo[a]pyrene		5	U
193-39-5	Indeno[1,2,3-cd]pyrene		5	U
53-70-3	Dibenz[a,h]anthracene		5	U
191-24-2	Benzo[g,h,i]perylene	-	5	U

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# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

S03 WATER

JN

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Lab Name:	НІМСО	HIMCO LANDFILL			Contract: ML-10C			503	WATER
Lab Code:	USEPA	-R5	Case No.: 200	10009	SAS	10.:	SI	OG No.:	GCMS026
Matrix: (soil/v	water)	WATE	3		L	ab San	nple ID:	S03 WA	TER
Sample wt/vo	ol:	1060	(g/ml) <u>M</u> l		L	ab File	ID:	1C1204	29.D
Level: (low/r	ned)	LOW			D	ate Re	ceived:		
			decanted: (Y/N)	N N	D	ate Ext	racted:	11/21/00	)
Concentrated	d Extract	Volume:	1000 (uL	)	D	ate Ana	alyzed:	12/05/00	)
Injection Volu	ıme: 1.0	) (uL	)		D	ilution F	actor:	1.0	
GPC Cleanup	o: (Y/N)	N	рH:						
				C	ONCEN	TRATIO	TINU NC	S:	
Number TICs	found:	3		(u	g/L or u	g/Kg)	UG/L		
CAS NUMB	ER	COMP	OUND NAME			RT	EST	r. CONC	. Q

21.70

24.27

30.69

Phenobarbital \$\$ 2,4,6(1H,3H,5H

unknown hydrocarbon

unknown

000050-06-6

2.

3.

# 1B SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

**S04 WATER** 

Lab Name:	HIMCO	LANDF	FILL	Coı	ntract:	ML-10C		
Lab Code:	USEPA	-R5	Case No.: 20010	0009	SAS No.:	;	SDG No.:	GCMS026
Matrix: (soil/v	water)	WATE	ER		Lab	Sample ID	: S04 WA	TER
Sample wt/vo	ol:	1050	(g/ml) ML		Lab	File ID:	1C1204	30.D
Level: (low/n	ned)	LOW	- manual state ( = 10.		Date	Received:		
% Moisture:			decanted:(Y/N)	N	Date	Extracted	: 11/21/00	)
Concentrated	d Extract	Volume	e: 1000 (uL)		Date	Analyzed:	12/05/00	)
njection Volu	ıme: 1	.0(u	L)		Dilut	ion Factor:	1.0	

GPC Cleanup: (Y/N) N pH:

CACNO	COMPOUND	(	014 014110.	_
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
111-44-4	bis(2-Chloroethyl)ether		5	U
108-95-2	Phenol		5	Ú
95-57-8	2-Chlorophenoi		5	UJ
541-73-1	1,3-Dichlorobenzene		5	U
106-46-7	1,4-Dichlorobenzene	···	5	U
95-50-1	1,2-Dichlorobenzene		5	U
100-51-6	Benzyl alcohol		5	U
95-48-7	2-Methylphenol		5	U
106-44-5	4-Methylphenol		5	U
108-60-1	bis(2-chloroisopropyl)ether	- ·	5	U
67-72-1	Hexachloroethane		5	Ū
621-64-7	N-Nitroso-di-n-propylamine	9	5	U
98-95-3	Nitrobenzene		5	Ū
78-59-1	Isophorone		5	U
88-75-5	2-Nitrophenol		5	U
105-67-9	2,4-Dimethylphenol		5	U
65-80-0	Benzoic acid		24	UJ
111-91-1	bis(2-Chloroethoxy)methar	ne	5	Ü
120-83-2	2,4-Dichlorophenol		5	U
120-82-1	1,2,4-Trichlorobenzene		5	U
91-20-3	Naphthalene		5	U
106-47-8	4-Chloroaniline		5	U
87-68-3	Hexachlorobutadiene		5	U
59-50-7	4-Chloro-3-methylphenol		5	U
91-57-6	2-Methylnaphthalene		5	U
77-47-4	Hexachlorocyclopentadien	e	24	リブ
88-06-2	2,4,6-Trichlorophenol		5	U
95-95-4	2,4,5-Trichlorophenol		5	U
91-58-7	2-Chloronaphthalene		5	U
88-74-4	2-Nitroaniline		5	U
208-96-8	Acenaphthylene		5	U
131-11-3	Dimethylphthalate		5	U
606-20-2	2,6-Dinitrotoluene		5	U
83-32-9	Acenaphthene		5	U
99-09-2	3-Nitroaniline		24	UJ
51-28-5	2,4-Dinitrophenol		24	UJ
132-64-9	Dibenzofuran		5	U

#### 1C

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Ν

EPA SAMPLE NO.

S04 WATER

Lab Name: HIMCO LANDFILL

Contract: ML-10C

SAS No.:

Lab Code:

USEPA-R5 Case No.: 20010009

(g/ml) ML

(uL)

SDG No.: GCMS026

Matrix: (soil/water)

WATER

Lab Sample ID: S04 WATER

Sample wt/vol:

1050

Lab File ID:

1C120430.D

Level: (low/med)

LOW

Date Received:

% Moisture:

decanted:(Y/N)-

Date Extracted: 11/21/00

Concentrated Extract Volume: 1000

Date Analyzed: 12/05/00

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

#### **CONCENTRATION UNITS:**

CAS NO.	COMPOUND (	ug/L or ug/Kg)	UG/L	Q
121-14-2	2,4-Dinitrotoluene		5	U
100-02-7	4-Nitrophenol		24	UJ
86-73-7	Fluorene		. 5	U
7005-72-3	4-Chlorophenyl-phenylether		5	U
84-66-2	Diethylphthalate		5	U
100-01-6	4-Nitroaniline		24	U
534-52-1	4,6-Dinitro-2-methylphenol		24	U
86-30-6	n-Nitrosodiphenylamine		5	U
101-55-3	4-Bromophenyl-phenylether		5_	U
118-74-1	Hexachlorobenzene		5	U
87-86-5	Pentachlorophenol		24	UJ
85-01-8	Phenanthrene		5	U
120-12-7	Anthracene		5	U
86-74-8	Carbazole		5	υ
84-74-2	Di-n-butylphthalate		5	U
206-44-0	Fluoranthene		5	U
129-00-0	Pyrene		5	U
85-68-7	Butylbenzylphthalate		5	U
91-94-1	3,3'-Dichlorobenzidine		24	UJ
56-55-3	Benzo[a]anthracene		55	U
218-01-9	Chrysene		5	U
117-81-7	bis(2-Ethylhexyl)phthalate		5	U
117-84-0	Di-n-octylphthalate		5_	U
205-99-2	Benzo[b]fluoranthene		5	U
207-08-9	Benzo[k]fluoranthene		5	U
50-32-8	Benzo[a]pyrene	,	5	U
193-39-5	Indeno[1,2,3-cd]pyrene		5	U
53-70-3	Dibenz[a,h]anthracene		5	U
191-24-2	Benzo[g,h,i]perylene		5	U
	2-HID ROXY BENZO 7	HIAZOLE	3	30 J

FORM I SV-2

for ididon

# SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name:	HIMCO	LANDFI	LL		Contr	act:	ML-100	)	304	VVAIE	.K
	USEPA-		Case No.:		9 SA	S No	.:	SDO	G No.:	GCMS	3026
Matrix: (soil/w	vater)	WATER	2			Lat	Sample	D: S	04 WA	TER	
Sample wt/vo	ol:	1050	(g/ml)	ML		Lat	File ID:	1	C12040	30.D	
Level: (low/m	ned)	LOW				Da	te Recei	ved:		·····	
% Moisture:		c	lecanted: ()	//N)	N	Da	te Extrac	ted: 1	1/21/00	)	
Concentrated	Extract \	√olume:	1000	(uL)		Dat	te Analyz	zed: 1	2/05/00	)	
Injection Volu	me: <u>1.0</u>	uL)	)			Dilu	ition Fac	tor: 1.	.0		
GPC Cleanup	): (Y/N)	N	pH:	<del></del>							
					CONC	ENTI	RATION	UNITS	:		
Number TICs	found:	1			(ug/L c	r ug/	Kg)	UG/L		-	
CAS NUMBI	ER :	COMP	NAN DNUC	ΛE			RT	EST.	CONC		Q
1		unknow	^				22.02			2	ŧ

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



# REGION 5 CENTRAL REGIONAL LABORATORY

### 536 SOUTH CLARK STREET

# CHICAGO, ILLINOIS 60605

Date:

JAN 2 1 2001

Subject:

Review of Region 5 Data for Himco Landfill

From:

Monica C. Paguia . Chemist Mone. C Pigue. Region 5 Central Regional Laboratory

To:

Gwen Massenburg SR-6J

Attached are the results for Site: <u>Himco Landfill (residential wells)</u>

CRL Data Set Number: SF 2001 0009 for analyses of: Pesticides and PCBs

Results are reported for sample numbers: 2001SKO1S01-S04, 2001SKO1R01, & 2001SKO1D02

# Results Status:

(	) Accer	otabl	le for	Use

(X) Data Qualified, but Acceptable for use

( ) Data Unacceptable for Use

Lykuia Kr	Africa Coordinator and Date Received
CRL/Data Manageme	Coordinator and Date Received
Date Transmitted:	
	PA project leader fill out the customer survey form on the Region 5 Intranct: a gov crl qa.html. ( by clicking on this link, or call George Schupp, CRL at 3-1226).
Please sign and date t	his form below and return it with any comments to:
	Sylvia Griffin
	Data Management Coordinator Region 5 Central Regional Laboratory
	ML - 10C
Received by and Date	
Comments:	

-winder

#### CASE NARRATIVE

DATE: December 15, 2000

PROJECT NAME: Himco Landfill

Analysis of Pesticides and PCBs

DATA SET NUMBER: 20010009

ANALYST: Monica C. Paguia, Chemist

### I. CASE DESCRIPTION:

The laboratory received 6 water samples on 11/17/00 for PCB/pesticides analysis. These water samples, along with the appropriate QC samples, were collected on 11/15 & 11/16/00 and were extracted on 11/20/00. The extraction holding time of 14 days after collection was met for all the samples.

The quality control samples consisted of a method blank (MB), a laboratory control sample and duplicate (LCS/LCS Dup.), a matrix spike and matrix spike duplicate (MS/MSD). The MB and LCS/LCS duplicate were prepared with clean reagent water. The MS/MSD were prepared with aliquot duplicate samples of 2001SK01S02. The LCS, LCS Dup., MS, & MSD were spiked with a pesticide mix spiking solution. No PCB spiking solutions were used. This was done in accordance with CRL policy of alternating PCB and pesticides spiking solutions for the QC samples with each extraction of sample batches.

GC#1 was used for the analysis. The extracts were injected for screening on 11/28/00 and were injected for analysis on 12/01/00. The Sequence Summary Form provides a listing of all the data file names, sample numbers/names and dates/times of injection for all the standards, QC samples and samples on each of the two GC columns. The injection holding time of 40 days after extraction was met for all the samples.

By screening the samples, it was discovered that the samples had neither PCBs nor sulfur in them. Therefore, clean-up of the samples was not necessary. Also, the samples were not analyzed with a 5 point calibration for PCBs. Rather, levels 1 & 2 of Aroclor 1242 were injected and used to update an existing method. Because low levels were of interest and no PCBs were discovered in the screening, the samples were analyzed using a 2 point method (A42W1215.M).

The Standard Operating Procedures SCPs that were followed for this analysis are CRL SOP GCCCL GC.EC Analysis: and GC007 (Liquid-liquid extraction).

### II. INSTRUMENT QUALITY CONTROLS:

#### 1. <u>Instrument Performance Check:</u>

#### DDT and Endrin Degradation Checks

The CRL QC limit of :15% degradation for DDT was met on both columns; endrin passed on column DB-608 but failed on column DB-5. None of the samples were qualified due to these results.

#### 2. Initial Calibration Check:

Initial calibration curves were injected on 11/30/00 and generated on 12/13/00. Valid 5 point calibration curves were generated passing CRL calibration acceptance criteria for each pesticide analyte.

### 3. Calibration Verification Standards (CVS):

Calibration verification standards were injected at 12 hours or less intervals within a sequence. CVS results generally passed the CVS CRL QC acceptance criteria. Any results that fell outside of the limits were slightly higher than the limit. This did not have any adverse effect on the samples

# 4. Retention Time (RT) Summary:

Retention time reproducibility (CVSs vs. initial) was acceptable for all the analytes. The RTs in the CVSs are within  $\pm~0.08$  minutes of the initial calibration.

### 5. QC Check Standards (Accuracy check):

The calibration standards used had been checked against QC check standards obtained from a different source. The QC limit of 80 - 120% recovery was met for most of the analytes. For those that fell below the limit, these analytes were qualified J (estimated)

# III. METHOD QUALITY CONTROL:

#### 1. A. Method Blank Results:

The method blank and instrument blank results did not contain target pesticides or PCBs above the detection limit.

## 2. <u>Surrogate Spike Compound Results:</u>

The surrogate recoveries for TCMX generally passed for all of the samples. However, DCB recovery was very low for

samples 2001SKO1S01, -S03, & -S04. This is probably due to matrix interferences &/or sample preparation interferences. Results reported from these samples were qualified J (Estimated).

- 3. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results: The MS/MSD were prepared using aliquot duplicate samples of 2001SKO1S02 and were spiked with a pesticide spiking solution. No PCB MS/MSD were prepared. Again, this was done in accordance with the CRL policy of the alternate use of pesticide and PCB spiking solutions. Results were acceptable.
- 4. <u>Laboratory Control Sample (LCS):</u>
  The LCS/LCS duplicate were spiked with pesticides. No PCB LCS/LCS Dup. were prepared. Results were acceptable.

#### IV. SAMPLE RESULTS:

There were no pesticides found above the MDL in any of the samples. Therefore, all of the data was qualified  $\bf U$  (Undetected) (See Form 1 sample results). Reporting limits were based on the lowest calibration standard. Again, results from 2001SKO1S01, -S03 & -S04 were flagged  $\bf J$  (Estimated) due to low surrogate recoveries, making results biased low or rather forcing detection limits to be biased high.

The data are qualified but acceptable for use.

The data sequired on GC#1 for these samples were saved in R5CRL\Vol3\FCB\_PEST\MPAGUIA\GC#1\DATA\ [subdirectory name]. The subdirectories are as follows: 112800 and 113000.

50/620

# ENVIRONMENTAL PROTECTION AGENCY FOR THE TEAM: PESTICIDES AND PCB'S

1	CHI LOG NUMBER	SAMPLE DESCRIPTION	WATER	WATER	WATER	WATER	WATER	
{	DU NUMBER 5010217 DATA SET NUMBER 200100 4 STUDY H1MCO LAMPFIL PRIORITY N CONTRACTOR N							
{	INVISION/BRANCH SUPER FLIMS SAMPLEDATE 11/15-14/00 LAB ARRIVAL DATE 11/17/00 DUE DATE 12/18/00						<u>'</u>	

CHL LOG NUMBER	SAMPLE DESCRIPTION	WATER TRIHALOMETHANES UG/L PES17414	WATER POLYCHLORINATED BIPHENYLB UG/L PES 17144	WATER CHLORINATED PESTICIDES UG/L PES 17134	WATER HERBICIDES UG/L PES 17424	WATER OIL AND GREASE MG/L PES 17439
20015/50/501	5090362-565 151 1207 (1212) 5090552-53-54765,61469 2016 1000 1000/1000 5050528 + 50563-30 1016 (1210) 17 502		M	XI		
11.15/41502	509652-53-64765,61869 200 161516616 118/1931		X	Х		
2015 RUIDO 2	5 656 525 + 56564 TO		M	X		
2001 JKU SU 3	MW144 5056521		X			
			XI	XI		
2027 5/20/126/	10:11 5 6:668:10-811 5056879-836 Monto Bunk		<b>N</b>	X		
					·	
				•		

# CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION	
В	This flag is used when the analyte is found in the associated <b>B</b> lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.	
D	This flag is used when the analyte concentration results from a required $\underline{D}$ ilution of the sample, extract or digestate.	
E	This flag is used to identify analyte concentrations <u>Exceeding</u> the upper calibration range of the analytical instrument after dilution of the sample, extract or digestate. <u>The reported value is considered to be estimated</u>	
J	This that is used when the analyte is <u>estimated</u> due to quality control limit(s) being exceeded. This flag accompanies all GC'MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. ( <u>J</u> is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)	
М	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL <u>Method Detection Limit (MDL)</u> but below the CRL reporting limit (RL). This flag applies to all values in this concentration range and indicates the quantitated value is <u>estimated</u> due to its <u>presence</u> in this concentration range.	
N	This flag applies to GC/MS TeNtatively Identified Complete is the mat have a mass spectral library match.	
Q	This that applies to analyte data that are severely estimated one to quality control and or $\underline{O}$ unntitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification that.	
R	This flag applies to analyte data that are <u>R</u> ejected and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. <u>No value is reported with this qualification flag.</u>	
U	This flag in used when the analyte was analyzed but <u>Undetected</u> in the sample. The CRL RL for the analyte accompanies this flag. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.	

Site Name:HIMOO LANDFILL
Lab Code:USEPA REG. V. Case No:200410039

Matrix: water

CAS No.	Analyte Name	ug/L	flags
319-64-6 58-89-9 319-85-7 76-44-3 319-86-8 309-00-2 1024-57-3 5103-74-2 5103-71-9 959-98-8 72-56-9 60-57-1 72-20-6 72-54-8 33213-65-9 50-29-3 7421-93-4 1031-07-8 72-43-5 53469-21-9	alpha-BHC Lindane beta-BHC Heptachlor delta-BHC Aldrin Hept Epowide gamma-Chlordane alpha-Chlordane Endosulfan I p,p'-DDE Dieldrin Endrin p,p'-DDD Endosulfan If p,p'-DDT Endrin Aldehyde Endosulfan Sulfate Methoxychlor Endrin ketone Aroclor 1242	0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 1.000	מנמטמטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט



Site Name:HIMCO LANDFILL Lab Code:USEPA REG. V Case No:20010009

Matrix: water

CAS No.	Analyte Name	ug/L	flags
319-84-6 58-89-9 319-85-7 76-44-8 319-86-8 309-00-2 1024-57-3 5103-74-2 5103-71-9 959-98-8 72-55-9 60-57-1 72-20-8 72-54-8 33213-65-9 50-29-3 7421-93-4 1031-07-8 72-43-5 53494-70-5 53469-21-9	alpha-BHC Lindane beta-BHC Heptachlor delta-BHC Aldrin Hept Epoxide gamma-Chlordane alpha-Chlordane Endosulfan I p,p'-DDE Dieldrin Endrin p,p'-DDT Endosulfan III p,p'-DDT Endrin Aldehyde Endosulfan Sulfate Methoxychlor Endrin ketone Aroclor 1242	0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500	מממממממממממממממממממטטיי מממממממממממממממ

page 1 cf 1

Thire Name:HIMCO LANDFILL \_\_\_ab Code:USEPA REG. T Case No:10010009

Matrix: water

CAS No.	Analyte Name	ug/L	flags
319-84-6 58-89-9 319-85-7 76-44-8 319-86-8 309-00-2 1024-57-3 5103-74-2 5103-71-9 59-98-8 72-55-9 60-57-1 72-20-8 72-54-8 33213-65-9 50-29-3 7421-93-4 1031-07-8 1031-07-8 1031-07-8 1034-91-9	alpha-BHC Lindane beta-BHC Heptachlor delta-BHC Aldrin Hept Epoxide gamma-Chlordane alpha-Chlordane Endosulfan I p,p'-DDE Dieldrin Endrin p,p'-DDT Endrin Aldehyde Endosulfan Sulfate Methoxychlor Endrin ketone Aroclor 1242	0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500	ללמללמל ל לים משמשמשמשמשמש ל לים לים איני



Site Name:HIMCO LANDFILD Lab Odde:USEPA REG. 7 Jase No:20010009

Matrix: water

CAS No.	Analyte Name	ug/L	flags
319-84-5 58-89-9 319-85-7 76-44-3 319-86-8 309-00-2 1024-57-3 5103-74-2 5103-71-9 959-98-8 72-55-9 60-57-1 72-20-8 72-54-8 33213-65-9 50-29-3 7421-93-4 1031-07-8 72-43-5 53494-70-5 53469-21-9	alpha-BHC Lindane beta-BHC Heptachlor delta-BHC Aldrin Hept Epoxide gamma-Chlordane alpha-Chlordane Endosulfan I p,p'-DDE Dieldrin Endrin p,p'-DDD Endosulfan II p,p'-DDT Endrin Aldehyde Endosulfan Sulfate Methoxychlor Endrin ketone Aroclor 1242	0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500	บ บ บ

-Site Name: HIMCO LANDFILL

ab Code: USEPA REG. 7 Case No:20010009

Matrix: water

CAS No.	Analyte Name	ug/L	flags
319-84-6 58-89-9 319-85-7 76-44-8 319-86-8 309-00-2 1024-57-3 5103-74-2 5103-71-9 359-98-8 72-55-9 60-57-1 72-20-8 72-54-8 33213-65-9 50-29-3 7421-93-4 1031-07-8 72-43-5 53494-70-5 53469-21-9	alpha-BHC Lindane beta-BHC Heptachlor delta-BHC Aldrin Hept Epoxide gamma-Chlordane alpha-Chlordane Endosulfan I p,p'-DDE Dieldrin Endrin p,p'-DDD Endosulfan II p,p'-DDT Endrin Aldehyde Endosulfan Sulfate Methoxychlor Endrin ketone Aroclor 1242	0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500	



Site Name:HIMCO LANDFILL Lab Code:USEPA REG. V Case No:20010009

Matrix: water

CAS No.	Analyte Name	ug/L	flags
319-84-6 58-89-9 319-85-7 76-44-8 319-86-8 309-00-2 1024-57-3 5103-74-2 5103-71-9 959-98-8 72-55-9 60-57-1 72-20-8 72-54-8 33213-65-9 50-29-3 7421-93-4 1031-07-8 72-43-5 53494-70-5 53469-21-9	alpha-BHC Lindar.e beta-BHC Heptachlor delta-BHC Aldrin Hept Epoxide gamma-Chlordane alpha-Chlordane Endosulfan I p,p'-DDE Dieldrin Endrin p,p'-DDD Endosulfan II p,p'-DDT Endrin Aldehyde Endosulfan Sulfate Methoxychlor Endrin ketone Aroclor 1242	0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500	עמממממממממממממממממממממממממממממממממממממ

### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



### REGION 5 CENTRAL REGIONAL LABORATORY

# 536 SOUTH CLARK STREET

# CHICAGO, ILLINOIS 60605

Date:

APR 0 = 2002

Additional PCB data

Subject:

Review of Region 5 Data for Himco Landfill

From:

Monica C. Paguia, Chemist mer

Region 5 Central Regional Laboratory

To:

Attached are the results for Site: Himco Landfill (residential wells)

CRL Data Set Number: <u>SF 2001 0009</u> for analyses of : <u>Pesticides and PCBs</u>

Results are reported for sample numbers: 2001SKO1S01-S04, 2001SKO1R01, & 2001SKO1D02

# Results Status:

- ( ) Acceptable for Use
- (X) Data Qualified, but Acceptable for use
- ( ) Data Unacceptable for Use

Sylvia Triffin CRI/Data Management Coordinator and Date Received
CRI Data Management Coordinator and Date Received
Date Transmitted: APP 7 - 1692
Please have the US EPA project leader fill out the customer survey form on the Region 5 Intranet: http://www.r5intra.epa.gov/crl/qa.html, ( by clicking on this link, or call George Schupp, CRL Sample Coordinator, at 3-1226).
Please sign and date this form below and return it with any comments to:
Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory ML - 10C
Received by and Date
Comments:

#### CASE NARRATIVE

DATE:

April 5, 2002

PROJECT NAME:

Himco Landfill, Analysis of Pesticides and PCBs

**DATA SET NUMBER:** 

20010009

ANALYST:

Monica C. Paguia, Chemist The

### **CORRECTION:**

As stated in the original case narrative, these 6 water samples were screened for PCBs prior to analysis. Based on the screening, there were no PCBs found in any of the samples. They were originally analyzed with a pesticide method and an Aroclor 1242 method on GC#1. The samples did not contain any pesticides nor Aroclor 1242.

Level 1 (0.100 ppm) of Aroclors 1016, 1232, 1248, 1254, & 1260 were injected on the same GC at approximately the same time the samples were injected. The sample chromatograms were compared to these aroclor standard chromatograms. The comparisons show that the samples do not contain these aroclors. Aroclor 1221 was not analyzed on GC#1.

Again, there were no pesticides nor PCBs found above the method detection limit (MDL) in any of the samples. Therefore, all of the data was qualified **U** (Undetected)(See Form 1 sample results). Reporting limits were based on the lowest calibration standard. Results from 2001SKO1S01, -S03 & -S04 were flagged **J** (Estimated) due to low surrogate recoveries, making results biased low or rather forcing detection limits to be biased high.

The data are qualified but acceptable for use.

# **CRL Data Review Qualification Codes**

QUALIFIER	DESCRIPTION	
В	This flag is used when the analyte is found in the associated <u>B</u> lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.	
J	This flag is used when the analyte is <u>estimated</u> due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. ( <u>J</u> is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)	
M	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, with a quantity at or above the CRL <u>Method Detection Limit (MDL)</u> but below the lowest concentration of the calibration curve. This flag indicates the quantitated value is <u>estimated</u> since it falls below the lowest calibration standard in the calibration curve.	
N	This flag applies to GC/MS TeNtatively Identified Compounds (TICs) that have a mass spectral library match.	
Q	This flag applies to analyte data that are severely estimated due to quality control and/or <b>Q</b> uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.	
R	This flag applies to analyte data that are <u>Rejected</u> and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. <u>No value is reported with this qualification flag.</u>	
U	This flag in used when the analyte was analyzed for but <u>Undetected</u> in the sample. The CRL RL for the analyte accompanies this flag. When the customer requests CRL to report below our RL down to our MDL, undetected analytes are reported with a "U" code and the MDL. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.	

# Pesticide/PCB Results SUMMARY

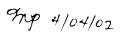
2001SKO1R01

-Site Name:HIMCO LANDFILL

ab Code: USEPA REG. V Case No: 20010009

Matrix: water

CAS No.	Analyte Name	ug/L	flags
319-84-6 58-89-9 319-85-7 76-44-8 319-86-8 309-00-2 1024-57-3 5103-71-9 959-98-8 72-55-9 60-57-1 72-20-8 72-54-8 33213-65-9 50-29-3 7421-93-4 1031-07-8 72-43-5 53494-70-5 12674-11-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5 1104-28-2	alpha-BHC Lindane beta-BHC Heptachlor delta-BHC Aldrin Hept Epoxide gamma-Chlordane alpha-Chlordane Endosulfan I p,p'-DDE Dieldrin Endrin p,p'-DDT Endrin Aldehyde Endosulfan Sulfate Methoxychlor Endrin ketone Aroclor 1016 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1254 Aroclor 1221*  *NOT ANALYZED (NA)	0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.1000 0.1000 0.1000 0.1000 0.1000	ניניניני ל עני משטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט



Site Name:HIMCO LANDFILL

Lab Code: USEPA REG. V Case No: 20010009

Matrix: water

319-85-7 76-44-8 319-86-8 309-00-2 1024-57-3 5103-74-2	alpha-BHC Lindane beta-BHC Heptachlor delta-BHC Aldrin	0.0200 0.0200 0.0200 0.0200 0.0200 0.0200	U J U J U J U J
58-89-9 319-85-7 76-44-8 319-86-8 309-00-2 1024-57-3 5103-74-2	Lindane beta-BHC Heptachlor delta-BHC Aldrin	0.0200 0.0200 0.0200 0.0200	U J U J
319-85-7 76-44-8 319-86-8 309-00-2 1024-57-3 5103-74-2	beta-BHC Heptachlor delta-BHC Aldrin	0.0200 0.0200 0.0200	U J U J
76-44-8 319-86-8 309-00-2 1024-57-3 5103-74-2	Heptachlor delta-BHC Aldrin	0.0200 0.0200	UJ
319-86-8 309-00-2 i024-57-3 5103-74-2	delta-BHC Aldrin	0.0200	
309-00-2 1024-57-3 5103-74-2	Aldrin		1 - ,
5103-74-2			עז
5103-74-2	Hept Epoxide	0.0200	UJ
	gamma-Chlordane	0.0200	ע ז
5103-71-9	alpha-Chlordane		UJ
959-98-8	Endosulfan I		UJ
72-55-9	p,p'-DDE		UJ
60-57-1	Dieldrin	0.0500	UJ
72-20-8	Endrin		UJ
72-54-8	p,p'-DDD	0.0500	UJ
33213-65-9	Endosulfan II	0.0500	UJ
50-29-3	p,p'-DDT	0.0500	ע ז
7421-93-4	Endrin Aldehyde	0.0500	U J
1031-07-8	Endosulfan Sulfate	0.0500	UJ
72-43-5	Methoxychlor	0.2500	עט
53494-70-5	Endrin ketone	0.0500	UЈ
12674-11-2	Aroclor 1016	0.1000	UJ
11141-16-5	Aroclor 1232	0.1000	UJ
53469-21-9	Aroclor 1242	0.1000	UJ
12672-29-6	Aroclor 1248	0.1000	UJ
11097-69-1	Aroclor 1254	0.1000	UJ
11096-82-5	Aroclor 1260	0.1000	UJ
1104-28-2	Aroclor 1221*		
	*NOT ANALYZED (NA)	<del></del>	
		l	

Site Name: HIMCO LANDFILL

b Code: USEPA REG. V Case No: 20010009

Matrix: water

CAS No.	Analyte Name	ug/L	flags
319-84-6 58-89-9 319-85-7 76-44-8- 319-86-8 309-00-2 1024-57-3 5103-74-2 5103-71-9 `59-98-8 72-55-9 60-57-1 72-20-8 72-54-8 33213-65-9 50-29-3 7421-93-4 1031-07-8 72-43-5 53494-70-5 12674-11-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5 1104-28-2	alpha-BHC Lindane beta-BHC Heptachlor delta-BHC Aldrin Hept Epoxide gamma-Chlordane alpha-Chlordane Endosulfan I p,p'-DDE Dieldrin Endrin p,p'-DDD Endosulfan II p,p'-DDT Endrin Aldehyde Endosulfan Sulfate Methoxychlor Endrin ketone Aroclor 1016 Aroclor 1232 Aroclor 1248 Aroclor 1254 Aroclor 1250 Aroclor 1221*  *NOT ANALYZED (NA)	0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0200 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 0.1000 0.1000 0.1000 0.1000	לנגננננ נ

Site Name:HIMCO LANDFILL

Lab Code: USEPA REG. V Case No: 20010009

Matrix: water

Site Name: HIMCO LANDFILL

b Code: USEPA REG. V Case No: 20010009

Matrix: water

	Analyte Name	ug/L	flags
319-84-6 58-89-9 319-85-7 76-44-8 319-86-8 309-00-2 1024-57-3 5103-74-2 5103-71-9 359-98-8 72-55-9 60-57-1 72-20-8 72-54-8 33213-65-9 50-29-3 7421-93-4 1031-07-8 72-43-5 12674-11-2 11141-16-5 53469-21-9 12672-29-6 11096-82-5 104-28-2	alpha-BHC Lindane beta-BHC Heptachlor delta-BHC Aldrin Hept Epoxide gamma-Chlordane alpha-Chlordane Endosulfan I p,p'-DDE Dieldrin Endrin p,p'-DDD Endosulfan II p,p'-DDT Endrin Aldehyde Endosulfan Sulfate Methoxychlor Endrin ketone Aroclor 1016 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1254 Aroclor 1260 Aroclor 1221* *NOT ANALYZED (NA)	0.0200 0.0200 0.0200 0.0500 0.0500 0.0500 0.0500	UJ

page 1 of 1

1

# Pesticide/PCB Results SUMMARY

2001SK01S04

Site Name: HIMCO LANDFILL

Lab Code: USEPA REG. V Case No: 20010009

Matrix: water

CAS No.	Analyte Name	ug/L	flags
319-84-6 58-89-9 319-85-7 76-44-8 319-86-8 309-00-2 1:024-57-3 5103-74-2 5103-71-9 959-98-8 72-55-9 60-57-1 72-20-8 72-54-8 33213-65-9 50-29-3 7421-93-4 1031-07-8 72-43-5 53494-70-5 12674-11-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5 1104-28-2	alpha-BHC Lindane beta-BHC Heptachlor delta-BHC Aldrin Hept Epoxide gamma-Chlordane alpha-Chlordane Endosulfan I p,p'-DDE Dieldrin Endrin p,p'-DDD Endosulfan II p,p'-DDT Endrin Aldehyde Endosulfan Sulfate Methoxychlor Endrin ketone Aroclor 1016 Aroclor 1232 Aroclor 1242 Aroclor 1254 Aroclor 1254 Aroclor 1221*  *NOT ANALYZED (NA)	0.0200	מטמטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט

page 1 of 1

Try 4/04/02

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



# REGION 5 CENTRAL REGIONAL LABORATORY

# 536 SOUTH CLARK STREET

# **CHICAGO, ILLINOIS 60605**

Date:	Color (1999)
Subject:	Review of Region 5 Data for Himco Dump Code:054J
From:	ESAT , Chemist Region 5 Central Regional Laboratory
To:	Gwen Massenburg SR-GT
CRL Data S	ethe results for Site: Himco Dump Code:054J et Number: 20010009 of: ICP Metals
Results are	reported for sample numbers: <u>2001SK01S01</u> , <u>2001SK01S02</u> , <u>2001SK01D02</u> , <u>03</u> , <u>2001SK01S04</u> and <u>2001SK01R01</u>
(x) Data Qu	us: able for Use for most Metals nalified, but Acceptable for use where flagged "J" due to baseline drift or contamination nacceptable for Use

Julieur a	f for and Date Received
CRL Data Manageme	nt Coordinator and Date Received
Date Transmitted:	Dall Spe
	PA project leader fill out the customer survey form on the Region 5 Intranet: a.gov/crl/qa.html, (← by clicking on this link, or call George Schupp, CRL at 3-1226).
Please sign and date th	nis form below and return it with any comments to:
	Sylvia Griffin
	Data Management Coordinator
	Region 5 Central Regional Laboratory
	ML - 10C
Received by and Date	
Comments:	

.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.010

Date Received: 05/05/00

Lab File ID: H1049

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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7		- !		. !
8			<u></u>	- ¦ <b></b> ¦
9		-		-
10		-		· ¦
11.		-	ļ	-
12.		-		-
13.		- [		-
14.		-		·
15.	_{	-	<u></u>	- ¦
¦ 16. ¦ 17.	_	-	<u> </u>	-
18.		- {	<u> </u>	- { {
110.   19.		-	<u> </u>	-
20.	_	-	<del> </del>	-
21.		- ¦	<u> </u>	-
22.	_	-	ļ	-
23.		-	l	-
24.		- }		-
25.		-	ļ	-
26.		-	<u> </u>	-
27.		-		-
28.		- !		- i i
29.		-	<u> </u>	-
30.		-		-
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

E01TQ

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.011

Date Received: 05/05/00

Lab File ID: H1050

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION (ug/L) CAC NO

CAS NO.	COMPOUND	(ug/L)	Q
108-95-2	Phenol	5	U
	bis(2-Chloroethyl)ether	5	Ū
	2-Chlorophenol	5	U
95-48-7	2-Methylphenol	5	<b>!</b> U
	2,2'-oxybis(1-Chloropropane)	5	U
	4-Methylphenol	5	ប
621-64-7	N-Nitroso-di-n-propylamine	5	U
67-72-1	Hexachloroethane	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
	2-Nitrophenol	5	U
	2,4-Dimethylphenol	5	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
	2,4-Dichlorophenol	5	U
	Naphthalene	5	U
	4-Chloroaniline	5	U
	Hexachlorobutadiene	5	U
	4-Chloro-3-methylphenol	5	ľŪ
	2-Methylnaphthalene	5	U
	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	ľU
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalane	5	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	5	U
208-96-8	Acenaphthylene	5	ប
606-20-2	2,6-Dintrotoluene	5	U
99-09-2	3-Nitroaniline	20	ប
83-32-9	Acenaphthene	5	U
I 1			1

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

E01TQ

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.011 Date Received: 05/05/00

Lab File ID: H1050 Date Extracted: 05/09/00

Sample Volume: 1000 (mL) Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 120-12-7 84-74-2 129-00-0 85-68-7 129-00-0 129-00-0 129-00-0 117-81-7 117-84-0 205-99-2 207-08-9 193-39-5 193-39-5 53-70-3	Butylbenzylphthalate3,3'-DichlorobenzidineBenzo(a)anthraceneChrysenebis(2-Ethylhexyl)phthalateDi-n-octylphthalateBenzo(b)fluorantheneBenzo(k)fluorantheneBenzo(a)pyreneIndeno(1,2,3-cd)Pyrene	20 20 5 5 5 5 5 20 20 5 5 5 5 5 5 5 5 5	0 U U U U U U U U U U U U U U U U U U U
191-24-2	Benzo(g,h,i)perylene	-	U

(1) - Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

E01TQ

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.011

Date Received: 05/05/00

Lab File ID: H1050

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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7.		_		- i
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10.				- i
11.				·
12.				·
13.				1
14.				1
15.				1
16.				1
17.				
18.				
19.				1
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EPA SAMPLE NO. LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

ECFN2

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Date Received: 05/05/00 Lab Sample ID: 6066.003

Lab File ID: H1041 Date Extracted: 05/09/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION CAS NO COMPOUND

	CAS NO.	COMPOUND	(ug/L)	Q
	108-95-2	-Phenol	5	U
i	111-44-4	-bis(2-Chloroethyl)ether	:	บ
į	95-57-8	-2-Chlorophenol	:	U
į		-2-Methylphenol	-	U
į		-2,2'-oxybis(1-Chloropropane)	-	U
i		-4-Methylphenol	5	บ
į		-N-Nitroso-di-n-propylamine	;	U
į		-Hexachloroethane	5	lu i
į	98-95-3	-Nitrobenzene	5	ָ ע
i	78-59-1			U
į	88-75-5		5	<u>י</u> ט
į		-2,4-Dimethylphenol	5	U
İ		-bis(2-Chloroethoxy) methane	5	U
1		-2,4-Dichlorophenol	5	ן ט
1	91-20-3		5	U
į	106-47-8	-4-Chloroaniline	5	U
1	87-68-3	-Hexachlorobutadiene	5	U
		-4-Chloro-3-methylphenol	5	lu l
1	91-57-6	-2-Methylnaphthalene	5	U
;	77-47-4	-Hexachlorocyclopentadiene	5	U !
1	88-06-2	-2,4,6-Trichlorophenol	5	U
1	95-95-4	-2,4,5-Trichlorophenol	20	U
1	91-58-7	-2-Chloronaphthalane	5	lu l
ļ	88-74-4	-2-Nitroaniline	20	U
l	131-11-3	-Dimethylphthalate	5	ן טן
i	208-96-8	-Acenaphthylene	5	l U
1	606-20-2	-2,6-Dintrotoluene	5	U
1	99-09-2	-3-Nitroaniline	20	tu i
1	83-32-9	-Acenaphthene	5	U
1				1

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECFN2

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: 6066.003 Date Received: 05/05/00

Lab File ID: H1041 Date Extracted: 05/09/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
l		T	
51-28-5	2,4-Dinitrophenol	20	U
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	5	U
121-14-2	2,4-Dinitrotoluene	_	U
	Diethylphthalate	3	J
7005-72-3	4-Chlorophenyl-phenylether_	5	\U \
	Fluorene	5	ן ט
100-01-6	4-Nitroaniline	20	ן טן
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	N-Nitrosodiphenylamine (1)	- <del> </del> 5	U
	4-Bromophenyl-phenylether		[U
	Hexachlorobenzene		U
	Pentachlorophenol		U
85-01-8	Phenanthrene		U
	Anthracene	5	U
84-74-2	Di-n-butylphthalate	5	U
	Fluoranthene	5	U
129-00-0		5	U
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	5	U
56-55-3	Benzo(a) anthracene	-   5	Ιυ I
218-01-9	Chrysene		ָט !
	bis(2-Ethylhexyl)phthalate_		
117-84-0	Di-n-octylphthalate		Ū
205-99-2	Benzo(b) fluoranthene	•	υ i
207-08-9	Benzo(k) fluoranthene	-   5	Ū
50-32-8	Benzo(a) pyrene	- i 5	บ
193-39-5	Indeno(1,2,3-cd)Pyrene	5	U
53-70-3	Dibenz(a,h)anthracene	- j	Ü
191-24-2	Benzo(g,h,i)perylene		U
1		- i	j
		- ' <del></del>	''

(1) - Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

# TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.003

Date Received: 05/05/00

Lab File ID: H1041

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 1

l	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.000934-34-	2(3H)-Benzothiazolone	21.01	<b>=====================================</b>	IJN -
2.				
3.		•	i	j —
4.				
6.	1	i		
7	I	!	l	
8		!	!	!i
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10		İ	ļ	
111.		<u> </u>		
				i
13.	i	i	ļ	{ <i>{</i>
14.   15.		<u> </u>	İ	
126		!	1	
117		<u> </u>		{
110		!		
19.		<u> </u>	!	ii
20.				
21.		}	<u></u>	ii
22.		i		ii
23.				
24.		<u> </u>		<u> </u>
25.			I	
26.			1	
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECFN3

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.004 Date Received: 05/05/00

Lab File ID: H1042 Date Extracted: 05/09/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

G1 G 110	COMPOURT	CONCENTRATION	_
CAS NO.	COMPOUND	(ug/L)	Q
108-95-2			ן ט
i 111-44-4	bis(2-Chloroethyl)ether	!	U
i 95-57-8	2-Chlorophenol	:	U
	2-Methylphenol	:	U
	2,2'-oxybis(1-Chloropropane)	:	U
	4-Methylphenol	:	Ŭ
621-64-7	N-Nitroso-di-n-propylamine	:	U
	Hexachloroethane	:	Ū
98-95-3	Nitrobenzene	:	U
	Isophorone	:	U
	2-Nitrophenol	:	U
	2,4-Dimethylphenol	!	U
	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	:	U
91-20-3	Naphthalene	5	lU ¦
	4-Chloroaniline	5	U
	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	! 5	U
¦ 88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	ן טן
91-58-7	2-Chloronaphthalane	5	U
88-74-4	2-Nitroaniline	20	lu i
131-11-3	Dimethylphthalate		<u>י</u> ט
208-96-8	Acenaphthylene	5	iū i
606-20-2	2,6-Dintrotoluene	i	Ü
99-09-2	3-Nitroaniline	20	! - !
83-32-9	Acenaphthene	•	Ū
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EPA SAMPLE NC.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

ECFN3

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.004

Date Received: 05/05/00

Lab File ID: H1042

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 84-74-2 129-00-0 85-68-7 129-00-0 117-84-0 205-99-2 117-84-0 205-99-2 117-84-0	2,4-Dinitrophenol4-NitrophenolDibenzofuran2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenyletherFluorene4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluorantheneBenzo(a) anthraceneChryseneDi-n-octylphthalateBenzo(b) fluorantheneBenzo(a) pyreneBenzo(a,h) anthraceneDibenz(a,h) anthraceneBenzo(g,h,i) perylene	20 5 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	מפמממממממממט
		-	i i

(1) - Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

# TENTATIVELY IDENTIFIED COMPOUNDS

01122	ECFN3
t: 68-D7-0004	

Lab Name: PDP ANALYTICAL SERVICES Contract

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.004

Date Received: 05/05/00

Lab File ID: H1042

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 1

	COMPOUND NAME	RT	EST. CONC.	Q
1.000934-34- 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.	2 (3H) -Benzothiazolone	RT 22.95	EST. CONC. (ug/L)  21	Q JN
23 .				

1LCB EPA SAMPLE NO. LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

ECFN4

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.005 Date Received: 05/05/00

Lab File ID: H1043 Date Extracted: 05/09/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO. COMPOUND CONCENTRATION (ug/L) C

	CAS NO.	COMPOUND	(ug/L)	Q
	108-95-2	- Phenol	<u></u>	U
		-bis(2-Chloroethyl)ether		. U
i	95-57-8	-2-Chlorophenol	_	บ
ĺ	95-48-7	-2-Methylphenol	•	Ū
i	108-60-1	-2,2'-oxybis(1-Chloropropane)	·	Ū
į	106-44-5	-4-Methylphenol		U I
į	621-64-7	-N-Nitroso-di-n-propylamine	_	บ
j	67-72-1	-Hexachloroethane		บ
i	98-95-3	-Nitrobenzene		υ
ĺ	78-59-1	-Isophorone	5	U
Ì	88-75-5	-2-Nitrophenol		U
İ	105-67-9	-2,4-Dimethylphenol	5	U
1	111-91-1	-bis(2-Chloroethoxy)methane	5	U
		-2,4-Dichlorophenol	5	U
	91-20-3		5	U
1	106-47-8	-4-Chloroaniline	5	U
		-Hexachlorobutadiene	5	U
l	59-50-7	-4-Chloro-3-methylphenol	5	U
ŀ	91-57-6	-2-Methylnaphthalene	5	ן ט
-	77-47-4	-Hexachlorocyclopentadiene	5	U
1	88-06-2	-2,4,6-Trichlorophenol	5	U !
-	95-95-4	-2,4,5-Trichlorophenol	20	U
1	91-58-7	-2-Chloronaphthalane	5	U
-	88-74-4	-2-Nitroaniline	20	U
1	131-11-3	-Dimethylphthalate	5	U ¦
-	208-96-8	-Acenaphthylene	5	U
1	606-20-2	-2,6-Dintrotoluene	5	U
1	99-09-2	-3-Nitroaniline	20	
-	83-32-9	-Acenaphthene	5	U
1			}	

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECFN4

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.005 Date Received: 05/05/00

Lab File ID: H1043 Date Extracted: 05/09/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
51-28-5	2,4-Dinitrophenol	_ 20	• •
100-02-7	4-Nitrophenol	_ 20	
	Dibenzofuran	- !	U
	2,4-Dinitrotoluene	<b>-</b> :	U
	Diethylphthalate	- !	J
	4-Chlorophenyl-phenylether_	- :	ָּט ן
	Fluorene		U
	4-Nitroaniline	_ ! 20	: -
	4,6-Dinitro-2-methylphenol_		U
	N-Nitrosodiphenylamine (1)_	_	U
101-55-3	4-Bromophenyl-phenylether	_	U
118-74-1	Hexachlorobenzene	_	U
87-86-5	Pentachlorophenol	_ <b> </b> 20	U
85-01-8	Phenanthrene	5	ן טן
	Anthracene		U !
84-74-2	Di-n-butylphthalate	5	ן טן
	Fluoranthene		ן ט ן
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	- l 5	ן ט
	3,3'-Dichlorobenzidine	5	ן ט
	Benzo(a) anthracene	- i 5	וֹ עוֹ
	Chrysene	5	iu i
	bis(2-Ethylhexyl)phthalate		İĴİ
	Di-n-octylphthalate		U
205-99-2	Benzo(b) fluoranthene	- <b>j</b> 5	iu i
207-08-9	Benzo(k) fluoranthene	5	U
50-32-8	Benzo(a)pyrene		lŭ i
	Indeno(1,2,3-cd)Pyrene	- :	U
	Dibenz (a, h) anthracene		Ü
	Benzo(g,h,i)perylene		Ū
		- i	

(1) - Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

ECFN4

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.005

Date Received: 05/05/00

Lab File ID: H1043

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO. LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECFN5

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.006

Date Received: 05/05/00

Lab File ID: H1044

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
108-95-2 111-44-4 95-57-8 95-48-7 108-60-1 106-44-5 621-64-7 98-95-3 188-75-5 105-67-9 111-91-1 120-83-2 111-91-1 120-83-2 91-20-3 106-47-8 87-68-3 91-57-6 77-47-4 88-06-2 95-95-4 91-58-7 131-11-3	Phenolbis(2-Chloroethyl)ether2-Chlorophenol2-Methylphenol2,2'-oxybis(1-Chloropropane)4-MethylphenolN-Nitroso-di-n-propylamineHexachloroethaneIsophorone2,4-Dimethylphenol2,4-Dimethylphenol2,4-DichlorophenolNaphthalene4-Chloroaniline4-Chloro-3-methylphenol2-Methylnaphthalene2,4,6-Trichlorophenol2,4,5-Trichlorophenol2,4,5-Trichlorophenol2-Nitroaniline2-Nitroaniline2-Nitroaniline	(ug/L) 555555555555555555555555555555555555	מפמממממממממממממ
606-20-2	Acenaphthylene 2,6-Dintrotoluene 3-Nitroaniline Acenaphthene	5 20	บ บ บ

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.006 Date Received: 05/05/00

Lab File ID: H1044 Date Extracted: 05/09/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CONCENTRATION CAS NO. COMPOUND (ug/L) 20 U 51-28-5-----2,4-Dinitrophenol 100-02-7----4-Nitrophenol 20 U | 132-64-9------Dibenzofuran 5 **|** U 5 **|** U | 121-14-2----2,4-Dinitrotoluene 5 U 84-66-2-----Diethylphthalate 7005-72-3----4-Chlorophenyl-phenylether 5 | U 86-73-7-----Fluorene 5 | U 20 U 100-01-6----4-Nitroaniline | 534-52-1----4,6-Dinitro-2-methylphenol\_\_\_ 20 U | 86-30-6-----N-Nitrosodiphenylamine (1)\_\_\_ 5 | U l 101-55-3-----4-Bromophenyl-phenylether\_\_\_\_ 5 U 5 **U** 118-74-1-----Hexachlorobenzene 20 U 87-86-5-----Pentachlorophenol 85-01-8-----Phenanthrene 5 | U 120-12-7-----Anthracene 5 | U 84-74-2-----Di-n-butylphthalate 5 | U 206-44-0-----Fluoranthene 5 | U 5 | U 129-00-0-----Pyrene 5 **|** U 85-68-7-----Butylbenzylphthalate 91-94-1----3,3'-Dichlorobenzidine\_ 5 U 5 U 56-55-3-----Benzo(a)anthracene 218-01-9-----Chrysene 5 | U l 117-81-7-----bis(2-Ethylhexyl)phthalate\_\_ 5 | U 117-84-0-----Di-n-octylphthalate 5 U 205-99-2----Benzo(b) fluoranthene 5 ! U 207-08-9-----Benzo(k) fluoranthene 5 U 50-32-8-----Benzo(a)pyrene 193-39-5-----Indeno(1,2,3-cd)Pyrene 5 | U 53-70-3-----Dibenz(a,h)anthracene\_\_ 5 U | 191-24-2----Benzo(g,h,i)perylene\_ 5 | U

(1) - Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

# TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

ECFN5

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.006

Date Received: 05/05/00

Lab File ID: H1044

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHFFT

ECFN6 Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.007

Date Received: 05/05/00

Lab File ID: H1047

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

			CONCENTRATION	
	CAS NO.	COMPOUND	(ug/L)	Q
í			<u></u> _	
ļ	108-95-2		5	U
¦	111-44-4	-bis(2-Chloroethyl)ether	5	U
1		-2-Chlorophenol	5	U
i	95-48-7	-2-Methylphenol	5	U
ļ	108-60-1	-2,2'-oxybis(1-Chloropropane)	5	U
1		-4-Methylphenol	5	U
ļ		-N-Nitroso-di-n-propylamine_	5	U
i	67-72-1	-Hexachloroethane	5	U
i	98-95-3	-Nitrobenzene	1 5	U !
1	78-59-1	-Isophorone	<u> </u>	U
¦	88-75-5		5	U
1	105-67-9	-2,4-Dimethylphenol	5	U ¦
i	111-91-1	-bis(2-Chloroethoxy)methane	5	U
ļ	120-83-2	-2,4-Dichlorophenol	<u> </u>	U
į	91-20-3	-Naphthalene	5	U
l		-4-Chloroaniline	5	U
		-Hexachlorobutadiene	-	U
į		-4-Chloro-3-methylphenol	· -	U
į		-2-Methylnaphthalene	•	U
i	77-47-4	-Hexachlorocyclopentadiene	·	ט
į	88-06-2	-2,4,6-Trichlorophenol	!	U
į		-2,4,5-Trichlorophenol	20	: - :
į		-2-Chloronaphthalane	•	U
		-2-Nitroaniline	20	: :
	131-11-3	Dimethylphthalate	:	U
	208-96-8	-Acenaphthylene	-	U
	606-20-2	-2,6-Dintrotoluene	:	U
į	99-09-2	-3-Nitroaniline	20	: - :
	83-32-9	-Acenaphthene	5	U
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECFN6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.007

Date Received: 05/05/00

Lab File ID: H1047

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL)

Dilution Factor: 1.0

Injection Volume: 1 (uL)

(1) - Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

ECFN6

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.007

Date Received: 05/05/00

Lab File ID: H1047

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECFN8

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.008

Date Received: 05/05/00

Lab File ID: H1048

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION	
(ug/L)	Q

CAS NO.	COMPOUND	(ug/L)	Q
108-95-2		·	U
111-44-4	bis(2-Chloroethyl)ether	!	U
95-57-8	2-Chlorophenol	:	U
95-48-7	2-Methylphenol	•	U
108-60-1	2,2'-oxybis(1-Chloropropane)		U
106-44-5	4-Methylphenol	<u> </u>	U
621-64-7	N-Nitroso-di-n-propylamine_	<u>.                                      </u>	U
67-72-1	Hexachloroethane	:	U
98-95-3	Nitrobenzene		U
78-59-1	Isophorone	:	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
111-91-1	bis(2-Chloroethoxy)methane		U
120-83-2	2,4-Dichlorophenol	5	U
91-20-3	Naphthalene	5	U
	4-Chloroaniline	5	\U \
87-68-3	Hexachlorobutadiene	•	U
59-50-7	4-Chloro-3-methylphenol	<del> </del> 5	U ¦
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U !
88-06-2	2,4,6-Trichlorophenol	5	ן ט
95-95-4	2,4,5-Trichlorophenol	20	ן טן
91-58-7	2-Chloronaphthalane	5	U
88-74-4	2-Nitroaniline	20	ט
131-11-3	Dimethylphthalate	5	U
208-96-8	Acenaphthylene	5	U
i 606-20-2	2,6-Dintrotoluene	<b>!</b> 5	U
99-09-2	3-Nitroaniline	20	U i
83-32-9	Acenaphthene		U
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

ECFN8 Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Date Received: 05/05/00 Lab Sample ID: 6066.008

Date Extracted: 05/09/00

Lab File ID: H1048

Sample Volume: 1000 (mL) Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
51-28-5 100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 84-74-2 206-44-0 129-00-0 85-68-7 117-84-0 117-84-0 205-99-2 207-08-9 50-32-8 193-39-5	2,4-Dinitrophenol4-NitrophenolDibenzofuran2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenyletherFluorene4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluorantheneBenzo(a) anthraceneChrysenebis(2-Ethylhexyl) phthalateBenzo(b) fluorantheneBenzo(a) pyreneBenzo(a) pyreneIndeno(1,2,3-cd) Pyrene	20 20 5 5 20 20 5 5 5 5 5 5 5 5 5 5 5 5	ם ש ש ש ש ש ש ש ש ש ש ש ש ש ש ש ש ש ש ש
	Dibenz(a,h)anthracene Benzo(g,h,i)perylene	:	บ บ

(1) - Cannot be separated from Diphenylamine

#### 1LCF

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

ECFN8

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.008

Date Received: 05/05/00

Lab File ID: H1048

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
1.			 	
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1LCB

EPA SAMPLE NO.

CONCENTRATION

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.012 Date Received: 05/05/00

Lab File ID: H1051 Date Extracted: 05/09/00

Sample Volume: 1000 (mL) Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

83-32-9------Acenaphthene

1000

CAS NO. COMPOUND (ug/L) Q 5 | U 108-95-2----Phenol 111-44-4-----bis(2-Chloroethyl)ether 5 U 95-57-8----2-Chlorophenol 5 U 5 U 95-48-7-----2-Methylphenol 5 U 5 | U 106-44-5----4-Methylphenol\_\_\_\_ 5 U 621-64-7----N-Nitroso-di-n-propylamine 5 U 67-72-1-----Hexachloroethane | 98-95-3-----Nitrobenzene\_\_\_ 5 | U 5 U 78-59-1-----Isophorone 88-75-5----2-Nitrophenol 5 | U 105-67-9-----2,4-Dimethylphenol 5 U 5 U 111-91-1-----bis(2-Chloroethoxy)methane 5 U 120-83-2----2,4-Dichlorophenol\_\_\_\_ 5 U 91-20-3-----Naphthalene 106-47-8-----4-Chloroaniline 5 | U 87-68-3-----Hexachlorobutadiene 5 U 59-50-7-----4-Chloro-3-methylphenol 5 **U** 5 **|** U 91-57-6----2-Methylnaphthalene 5 | U 77-47-4-----Hexachlorocyclopentadiene 5 | U 88-06-2----2,4,6-Trichlorophenol\_ 20 U 95-95-4----2,4,5-Trichlorophenol 91-58-7----2-Chloronaphthalane 5 | U 20 U | 88-74-4-----2-Nitroaniline 5 ¦ U 131-11-3-----Dimethylphthalate 5 **U** 208-96-8-----Acenaphthylene 5 | U 606-20-2----2,6-Dintrotoluene 99-09-2-----3-Nitroaniline 20 U

5 U

1LCC

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

ECFP1

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.012 Date Received: 05/05/00

Lab File ID: H1051 Date Extracted: 05/09/00

Sample Volume: 1000 (mL) Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

			CONCENTRATION	
	CAS NO.	COMPOUND	(ug/L)	Q
	51-20-5	-2,4-Dinitrophenol	20	ITT
į	100-02-7		20	
į	132-64-9		1	u
į	121-14-2	-2,4-Dinitrotoluene	· -	U
į		-Diethylphthalate	:	Ĵ
į		-4-Chlorophenyl-phenylether_	:	U
į	86-73-7		I .	Ū
Ì	100-01-6		20	: :
1		-4,6-Dinitro-2-methylphenol	20	U
		-N-Nitrosodiphenylamine (1)	5	U
	101-55-3	-4-Bromophenyl-phenylether	1 5	U
	118-74-1	-Hexachlorobenzene	5	ן טן
	87-86-5	-Pentachlorophenol	20	\U
	85-01-8	-Phenanthrene	5	U
	120-12-7		5	U
	84-74-2	-Di-n-butylphthalate	5	U
	206-44-0	-Fluoranthene	•	ט
	129-00-0	-Pyrene		U
	85-68-7	-Butylbenzylphthalate	•	ט
		-3,3'-Dichlorobenzidine		U
		-Benzo(a)anthracene	!	U
	218-01-9		!	ן ט
		-bis(2-Ethylhexyl)phthalate	-	J
		-Di-n-octylphthalate	· -	ן טן
		-Benzo(b) fluoranthene	•	U
	207-08-9	-Benzo(k) fluoranthene	:	ט
	50-32-8	-Benzo(a)pyrene		U
	193-39-5	-Indeno(1,2,3-cd)Pyrene		U
	53-70-3	-Dibenz(a,h)anthracene	-	U
	i 191-24-2	-Benzo(g,h,i)perylene	j 5	U
			i	i i

(1) - Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

ECFP1

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.012

Date Received: 05/05/00

Lab File ID: H1051

Date Extracted: 05/09/00

Sample Volume: 1000 (mL) Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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13.		i	<u> </u>	- i — —
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#### 1LCB

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SLCS73

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: SVOL605

Date Received:

Lab File ID: H1031

Date Extracted: 05/05/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL)

Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
108-95-2 111-44-4 95-57-8 95-48-7 108-60-1 106-44-5 621-64-7 98-95-3 78-59-1 88-75-5 110-91-1 120-83-2 91-20-3 116-47-8 87-68-3 91-57-6 77-47-4 88-06-2 91-58-7 91-58-7 131-11-3 208-96-8 606-20-2	Phenolbis(2-Chloroethyl)ether2-Chlorophenol2-Methylphenol2,2'-oxybis(1-Chloropropane)4-MethylphenolN-Nitroso-di-n-propylamineHexachloroethaneNitrobenzeneIsophorone2-Nitrophenol2,4-Dimethylphenolbis(2-Chloroethoxy)methane2,4-DichlorophenolNaphthalene4-ChloroanilineHexachlorobutadiene4-Chloro-3-methylphenol2-Methylnaphthalene4-Chlorocyclopentadiene2,4,5-Trichlorophenol2,4,5-Trichlorophenol2-Chloronaphthalane2-NitroanilineDimethylphthalateAcenaphthylene2,6-Dintrotoluene	30 16 30 5 5 5 16 10 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ע פ ע פ ע פ ע פ ע פ ע פ ע פ ע פ ע פ ע פ
	3-Nitroaniline	20	U

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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SLCS73

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICE	Lab	CAL SERVI	TICAL S	ANAL	PDP	Name:	Lab
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Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Date Received: \_\_\_\_

Lab Sample ID: SVOL605

Date Extracted: 05/05/00 Lab File ID: H1031

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

> CONCENTRATION CAS NO. COMPOUND (ug/L) Q 20 U 51-28-5-----2,4-Dinitrophenol | 100-02-7----4-Nitrophenol 20 U | 132-64-9-----Dibenzofuran 5 | U | 121-14-2----2,4-Dinitrotoluene 11 84-66-2-----Diethylphthalate 14 5 | Ū 7005-72-3----4-Chlorophenyl-phenylether 86-73-7-----Fluorene 5 U 100-01-6----4-Nitroaniline 20 U | 534-52-1-----4,6-Dinitro-2-methylphenol 20 U 86-30-6----N-Nitrosodiphenylamine (1)\_\_\_ 10 5 | Ū 101-55-3-----4-Bromophenyl-phenylether 12 118-74-1-----Hexachlorobenzene\_\_\_\_ 87-86-5-----Pentachlorophenol 20 U 85-01-8-----Phenanthrene 5 | U | 120-12-7-----Anthracene 5 U 5 U 84-74-2-----Di-n-butylphthalate 206-44-0-----Fluoranthene\_\_\_\_ 5 U 5 | U 129-00-0-----Pyrene 85-68-7-----Butylbenzylphthalate 5 U 91-94-1-----3,3'-Dichlorobenzidine 5 | U 56-55-3-----Benzo(a)anthracene 5 U 5 U 218-01-9-----Chrysene 117-81-7----bis(2-Ethylhexyl)phthalate 5 U 5 U 117-84-0-----Di-n-octylphthalate 205-99-2----Benzo(b) fluoranthene 5 | U 207-08-9-----Benzo(k)fluoranthene 5 | U | 50-32-8-----Benzo(a)pyrene\_ 16 | 193-39-5-----Indeno(1,2,3-cd)Pyrene\_ 5 | U 5 | U 53-70-3-----Dibenz(a,h)anthracene\_ 5 | U 191-24-2----Benzo(g,h,i)perylene\_

(1) - Cannot be separated from Diphenylamine

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#### 1LCB

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SLCS76

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Sample ID: SVOL608

Date Received: \_\_\_\_\_

Lab File ID: H1039

Date Extracted: 05/09/00

CONCENTRATION

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Injection Volume: 1.0 (uL)

108-95-2Phenol 111-44-4bis(2-Chloroethyl)ether 95-57-82-Chlorophenol 95-48-72-Methylphenol 108-60-12,2'-oxybis(1-Chloropropane) 106-44-54-Methylphenol	5	บ บ บ
111-44-4bis(2-Chloroethyl)ether   95-57-82-Chlorophenol   95-48-72-Methylphenol   108-60-12,2'-oxybis(1-Chloropropane)	17 30 5 5 5	บ บ บ
95-57-82-Chlorophenol     95-48-72-Methylphenol     108-60-12,2'-oxybis(1-Chloropropane)	30 5 5 5	บ บ บ
95-48-72-Methylphenol	5 5 5 19	บ บ บ
108-60-12,2'-oxybis(1-Chloropropane)	5 5 19	บ บ
	5 19	Ū
i   Ub-44-54-WernVIDDEDOI	19	
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621-64-7N-Nitroso-di-n-propylamine		: :
67-72-1Hexachloroethane		
98-95-3Nitrobenzene	_	U
78-59-1Isophorone	11	: :
88-75-52-Nitrophenol		U
105-67-92,4-Dimethylphenol	<del>-</del>	U
111-91-1bis(2-Chloroethoxy)methane	_	U
120-83-22,4-Dichlorophenol	_	U
91-20-3Naphthalene	15	:
106-47-84-Chloroaniline	27	<u> </u>
87-68-3Hexachlorobutadiene	_	lU
59-50-74-Chloro-3-methylphenol	5	<b>l</b> U
91-57-6	5	ן טן
77-47-4Hexachlorocyclopentadiene	5	U
88-06-22,4,6-Trichlorophenol	30	1
95-95-42,4,5-Trichlorophenol	20	Ū
91-58-72-Chloronaphthalane	5	U
88-74-42-Nitroaniline	20	ן ט
131-11-3Dimethylphthalate		Ū
208-96-8Acenaphthylene		U
606-20-22,6-Dintrotoluene	_	Ū
99-09-23-Nitroaniline	20	•
83-32-9Acenaphthene		Ü
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20010009

50102D

## ENVIRONMENTAL PROTECTION AGENCY FOR THE TEAM: METALS

LOG NUMBER	FAMPLE DESCRIPTION  FH REPADIAL FOR  ALL SAMFLES WAS  (1)  METHOD BLANK	TOTAL METALS WATER TOTAL ICAP UG/L METIII	TOTAL METALS WATER AS UG/L MET181	TOTAL METALS WATER PB UG/L MET1191	TOTAL METALS WATER 58 UG/L METI201	TOTAL METALS WATER SE UG/L METIZII	TOTAL METALS WATER TL UG/L MET1221
'U  SKU  SO   'U  SKO  SU2 'U  SKU  DU2	15T RUS WILL 2 m 5056846-847 2 m 5056846-847 SUS WILL MS/MIN DUPULANT OF SUZ	X X X	X X X	X		X X X	-   X
001 SKU1 SO <b>4</b>	MW116A 5056822 101A 5056814	X	X		M.		X X ——————————————————————————————————
	<u>.</u>						

2000009

501021)

# ENVIRONMENTAL PROTECTION AGENCY FOR THE TEAM: MINERALS - NUTRIENTS

DIVISION/BRANCH SUPER	FUM) s	AMPLEDATE 11/15-16/10	LAB ARRIVAL DATE	11/17/00	DUE DATE 12/18/2000
DIL NUMBER SOLUZIO DAT	A SET NUMBER OUG	STUDY HIMCO LAGAMPRIC	PRIORITY	CONTRACTOR	N

CRL LOG NUMBER	SAMPLE DESCRIPTION PH CHORKED UN ALL SAMPLUS, SAMPLES, LOUI SKUISUS PH RUMPING = 9 MLUMHUS SAMPLES PH = 1,2	WATER PHENOLICS UG PHENOL/L MIN 74818	WATER CYANIDE UG CN/L MIN 74919	WATER GROSS ALPHA P CI/L MIN 75020	WATER CR <sup>18</sup> UG CR <sup>18</sup> /L MIN 74818	WATER MERCURY UG HG/L MIN 74717
MAISKAIRA	6-11-151.0					
192 (1982)	1ST RIK WUZL 5-056866				- -	
culskulsuz	2ms 5056870-85/MSN 2ms 5-056826 Dupucant et Su2				-	
				_	-	
	MW11645-056824			_		
<u>601,5 KC1504</u>	101A 5056815		<u> </u>	- -		
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20010009

ENVIRONMENTAL PROTECTION AGENCY.

501020

DIVISION/HUANCH SUPERFURN SAUPLING MATELLISION LAH AHRIVAL DATE 11/17/00 DUE DATE 12/18/00 DU NUMBER 501020 DATABLE NUMBER 20010079 STUDY HIMO LAMPTIC PRECUPETY DE CONTRACTOR NO I SAMPLE DESCRIPTION I MATHIX LUATURE MATERILIAMER CAL LING TEST CO HUMBEH W11346-16-16 UP 173 66-16-11 FE1235826 FE1235826 PE1235826 FE1235826 HE 1235826 20015KUL 5-05688 MUTHO BLAME ROL 5056860 1STRES WILL 5454846.4 2 NO RUSKULINSD (02 west word 5-05682 DUPLICATE IT SUZ DUZ 5.05682 MWILLEA 503 5-05681 1014 504

REPORT PRODUCED ON: 22-Nov-00

SAMPLE ORGANIZATION:

SAMPLE BATCH ID:

20010009

LABORATORY: REGION 5 CRL

SAMPLE FACILITY:

Himco Dump

SAMPLE:

2001SK01R01

ANALYZED:

22-Nov-00

STATION:

Method blank

COMPOUND	AMOUNT	(Units)
Aluminum Barium Beryllium Calcium Chromium Cobalt Copper Iron Magnesium Manganese Nickel Potassium	40 U 2 U 0.3 U 53.1 3 U 1 U 1.1 M 4.3 M 15.1 2 U 1.2 M B 219 M	(ug/L) (ug/L) (ug/L) (ug/L)
Silver Sodium Vanadium Zinc	1 U 212 B 4.3 M B 25 U	(ug/L) J (ug/L) (ug/L) (ug/L)

ANALYZED BY:

· X

11-25-00

REPORT PRODUCED ON: 22-Nov-00

SAMPLE ORGANIZATION:

SAMPLE BATCH ID:

20010009

LABORATORY: REGION 5 CRL

SAMPLE FACILITY:

Himco Dump

SAMPLE: 2001SK01S01

ANALYZED:

22-Nov-00

STATION: 1st res well + 2774 Course to

COMPOUND	AMOUNT				(Units)	
Aluminum	35.9	M			(ug/L)	
Barium	48.1				(ug/L)	
Beryllium	0.2	M	В		(ug/L)	
Calcium	102000				(ug/L)	
Chromium	3	U			(ug/L)	
Cobalt	1	U			(ug/L)	
Copper	2.3				(ug/L)	
Iron	60.2				(ug/L)	
Magnesium	24800				(ug/L)	
Manganese	103				(ug/L)	
Nickel	2.9		В	J	(ug/L)	
Potassium	2790				(ug/L)	
Silver	1	U			(ug/L)	
Sodium	53100				(ug/L)	
Vanadium	5.5	M	В		(ug/L)	
Zinc	21.7	M			(ug/L)	

REPORT PRODUCED ON: 22-Nov-00

SAMPLE ORGANIZATION:	SAMPLE BATCH ID:	20010009
SAMI EL ONGANIZATION.	OMMILE BATOTTO.	20010000

LABORATORY: REGION 5 CRL	SAMPLE FACILITY:	Himco Dump
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SAMPLE:	2001SK01S02	ANALYZED:	22-Nov-00
SAIVIPLE:	20013001302	ANALIZED.	Z Z - I N ( ) V - ( ) ( )

STATION:	2nd res well	1. 1. K. J. G. &
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COMPOUND	AMOUNT				(Units)
Aluminum Barium Beryllium	58.2 46.9 0.3	 M	В		(ug/L) (ug/L) (ug/L)
Calcium Chromium Cobalt	129000 3 0.8	U M	D		(ug/L) (ug/L) (ug/L)
Copper Iron Magnesium Manganese	1 1840 14200 1250	M			(ug/L) (ug/L) (ug/L) (ug/L)
Nickel Potassium Silver Sodium Vanadium	42300	U M	ВВ	J	(ug/L) (ug/L) (ug/L) (ug/L) (ug/L)
Zinc	14.3	М			(ug/L)

ANALYZED BY:



11-28-00

REPORT PRODUCED ON: 22-Nov-00

SAMPLE ORGANIZATION:

SAMPLE BATCH ID:

20010009

LABORATORY: REGION 5 CRL

SAMPLE FACILITY:

Himco Dump

SAMPLE: 2001SK01D02

ANALYZED:

22-Nov-00

STATION: duplicate of S02 Walk work

COMPOUND	AMOUNT				(Units)
Aluminum Barium Beryllium Calcium Chromium Cobalt Copper Iron Magnesium Manganese Nickel Potassium Silver Sodium Vanadium Zinc	53.7 47.4 0.1 129000 3 0.9 1.4 1720 14200 1250 3.6 4670 1 42700 3.4 20.3	M U M M	ВВВ	J	(ug/L) (ug/L)



REPORT PRODUCED ON: 22-Nov-00

SAMPLE ORGANIZATION:

SAMPLE BATCH ID: 20010009

LABORATORY: REGION 5 CRL

SAMPLE FACILITY:

Himco Dump

SAMPLE: 2001SK01S03

ANALYZED:

22-Nov-00

STATION: MW 116 A

COMPOUND	AMOUNT			(Units)
		•		
Aluminum	335			(ug/L)
Barium	133			(ug/L)
Beryllium	1.0	В	J	(ug/L)
Calcium	745000			(ug/L)
Chromium	3 L	)		(ug/L)
Cobalt	1.1			(ug/L)
Copper	2.1			(ug/L)
Iron	8200			(ug/L)
Magnesium	60000			(ug/L)
Manganese	1240			(ug/L)
Nickel	4.2	В	J	(ug/L)
Potassium	30800			(ug/L)
Silver	1 U	l		(ug/L)
Sodium	214000			(ug/L)
Vanadium	9.1	В	J	(ug/L)
Zinc	85.5			(ug/L)

REPORT PRODUCED ON: 22-Nov-00

SAMPLE ORGANIZATION: SAMPLE BATCH ID: 20010009

LABORATORY: REGION 5 CRL SAMPLE FACILITY: Himco Dump

SAMPLE: 2001SK01S04 ANALYZED: 22-Nov-00

STATION: 101 A

COMPOUND	AMOUNT			(Units)
	*	-		
Aluminum	112			(ug/L)
Barium	79.3			(ug/L)
Beryllium	0.6	В	J	(ug/L)
Calcium	227000			(ug/L)
Chromium	3 L	j		(ug/L)
Cobalt	1 (	J		(ug/L)
Copper	2 (	J		(ug/L)
Iron	9490			(ug/L)
Magnesium	20200			(ug/L)
Manganese	929			(ug/L)
Nickel	2.3	В	J	(ug/L)
Potassium	10100			(ug/L)
Silver	1 L	J		(ug/L)
Sodium	36700			(ug/L)
Vanadium	5.0 M	<b>Л</b> В		(ug/L)
Zinc	14.9 M	Λ		(ug/L)

ANALYZED BY

11-29-00

Lockheed Martin Services Group Environmental Services & Technologies Region 5 536 South Clark Street #1050 | Chicago, IL 60605 Telephone 342-353-8302 Facsimile 312-353-8307



Date:

November 28, 2000

To:

John V. Morris, EPA WAM

From:

Richard Dilg, ESAT Chemist

Thru:

Ziyad Rajabi, ESAT Team Manager

Copies:

John Ganz, ESAT Inorganic Group Leader

Jay Thakkar, ESAT Contract RPO

Ref:

TDF# 5104-308

WA# 05-00-4-04

Contract # 68D60002

SUBJECT:

Data Set SF20010009: ICP Analyses for Himco Dump samples using CRL Method 200

EP 11-28-00

Attached is the deliverable for Data Set SF20010009 for ICP analysis of 6 water samples.

If you have any question please feel free to contact ESAT.



Method Number: 200.7	Site Name: Himco Dump
Date Generated: November 28, 2000_	Work Unit Number: 05-00-4-04
Author: R.Dilg, Lockheed-ESAT	TDF Number: 5104-308
	Charge Number: ESE-51-058
	Batch ID No.: 20010009
	Parameter: ICP

#### ICP NARRATIVE

This narrative covers the analysis of 6 water samples from the named site sampled for ICP metals analysis.

Sample Nos.	Sample Station ID's	Sample collected	Analysis dates
2001SK01S01	S01 - Res Well 1	11-15-2000	11-22-2000
2001SK01S02	SO2 - Res Well 2	11-15-2000	11-22-2000
2001SK01D01	D02 - Dup of S02	11-15-2000	11-22-2000
2001SK01S03	MW 116A	11-15-2000	11-22-2000
2001SK01S04	S04/101 A	11-15-2000	11-22-2000
2001SK01R01	Method blank R01	11-15-2000	11-22-2000

Routine CRL hot block (water) digestion procedures were used to prepare the water samples for ICP analysis. The digested samples were analyzed using the Optima 3300 DV ICP unit using analysis run method water\_080300\_ESAT. Optima 3300 DV ICP results were stored to file 20010009 112200.

#### ICP RUN RESULTS

Analyte mdl's determined and rl values calculated earlier in the year for ESAT analysis work for the Optima 3300 DV were used. The calculated rl values were used in reporting sample analysis results for this data case.

11-25-7.

13.00

#### ICP RUN RESULTS - continued

An ambiguously stated flag in SOP HK005 is the "B" flag. Although a "more than 10 times" rule was mentioned for blanks for considering data as useable, it was not clearly stated whether or not the "B" flag should be used. As a matter of fact, to this analyst, from reading the wording used in the SOP the flow or intent seems to imply (but is not specifically stated to do so) to always use the "B" flag regardless of the sample level if a control audit blank is above an MDL level! This analyst used the "B" flag for those analyte cases where the MDL value was exceeded but the 10 times value was not exceeded.

Also, to better help understand the use of the "B" flag, let it be pointed out to the data user that the "B" flag is by definition a warning flag only. For estimated data, an <u>additional</u> flag (either an "M" or a "J" flag") is used to denote that the flagged result is in fact estimated.

#### Analysis RUN 1241 - Optima 3300 DV

29 analyte lines out of a possible 78 lines available using the Optim 3300 DV method were chosen by a plan agreed upon by Dr. J. V. Morris. These are to be used for routine reporting of analyte values that appear in the QA summary reports.

The following analytes will either not be addressed or only minimally mentioned in this case narrative:

Sn, Tl, As, Se, Sb, Mo, Pb, Cd, Ti, Y, Sr, Li

The following lists the case <u>pertinent</u> out-of-control QC audit check results:

#### RUN 1241:

Blanks:	Instr blk 1:	Cr267	0.90	$\mu { t g}/{ t L}$
		Ni231	0.69	11
	,	, V 310 .	81	н
	Digest blk 1:	Ag328	- 0.44	Ħ
		Al396	-17.36	11
		As193	- 3.71	#1
		Na589	67.31	11
		V 310	3 65	11

11-000

### Analysis RUN 1241 - Optima 3300 DV (continued)

Digest blk 2:	Ag328	- 0.49	μg/L
_	Al396	-22.57	н
	Be313	0.10	ti.
	Na589	84.85	11
Instr blk 2:	Ag328	- 0.55	11
	Be313	0.20	11
	Cr267	0.98	11
	Na589	154.4	11
	Ni231	0.58	н

Mid range: LCM1's: LCM1-1: Ag328 \*

QC's

LCM1-2: Ag328

Na589

19.9 % deviation

\* alternate QC audit check used to monitor this analyte

High AQC's: 1<sup>st</sup> Hi AQC: Zn213 - 19.48 % deviation

2nd Hi AOC: Zn213 ~ 18.89 "

RL check Soln: RL 1:

(See paragraphs below regarding RL's)

RL 2:

For the rl check audit, the reporting limit (rl) check solution was used for the analysis runs. Since many of the ESAT calculated rl values were close to the CRL rl values, the CRL RL check solution was used as the check solution for the Optima 3300 DV analysis run.

Presently no "control" actions are associated with the observed rl analyte values actually determined during the analysis runs. RL check solution values currently are being analyzed for purposes of generating a benchmark set of values which can be used to monitor the appropriateness of any given RL level of analyte concentration.



## Analysis RUN 1241 - Optima 3300 DV (continued)

As, Sb; Cd, Pb, Se, and Tl sample results were not reported by ICP; see GFAA results for these analytes.

For Al, the sample result for 2001SK01S01 was flagged "M" since it had a result between the MDL and the RL value and it is estimated because of this.

For Be, sample results for 2001SK01S01, S02, and D02 were flagged "M" since they had a result between the MDL and the RL value and they are estimated because of this. Sample results for 2001SK01S01, S02, D02, S03, and S04 were flagged "B" indicating they may have been affected by possible contamination indicated by blank analysis data. The sample results for 2001SK01S03 and S04 were also flagged "J" indicating possible high bias due to the blank contamination just noted and are estimated.

For Co, sample results for 2001SK01S02 and D02 were flagged "M" since they had a result between the MDL and the RL value and they are estimated because of this.

For Cu, sample results for 2001SK01R01, S02, and D02 were flagged "M" since they had a result between the MDL and the RL value and they are estimated because of this.

For Fe, the sample result for 2001SK01R01 was flagged "M" since it had a result between the MDL and the RL value and it is estimated because of this.

For Ni, the sample result for 2001SK01R01 was flagged "M" since it has a result between the MDL and the RL value and it is estimated because of this. Sample results for 2001SK01R01, S01, S02, D02, S03, and S04 were flagged "B" indicating they may have been affected by possible contamination indicated by blank analysis data. Sample results for 2001SK01S01, S02, D02, S03, and S04 were also flagged "J" indicating possible high bias due to the blank contamination just noted and are estimated.

For K, the sample result for 2001SK01R01 was flagged "M" since it had a result between the MDL and the RL value and it is estimated because of this.



#### Analysis RUN 1241 - Optima 3300 DV (continued)

For Na, the sample result for 2001SK01R01 was flagged "B" indicating it may have been affected by possible contamination indicated by blank analysis data. This sample result was also flagged "J" indicating possible high bias due to the blank contamination just noted and is estimated. The final mid range QC check standard value exceeded upper limit criteria but the high QC check values were within limits. Only the sample result for 2001SK01R01 would be significantly affected because of possible high bias; the remaining Na sample results are usable.

For V, sample results for 2001SK01R01, S01, S02, D02, and S04 were flagged "M" since they had a result between the MDL and the RL value and they are estimated because of this. Sample results for 2001SK01R01, S01, S02, D02, S03, and S04 were flagged "B" indicating they may have been affected by possible contamination indicated by blank analysis data. The sample result for 2001SK01S03 was also flagged "J" indicating possible high bias due to the blank contamination just noted and is estimated.

For Zn, sample results for 2001SK01S01, S02, D02, and S04 were flagged "M" since they had a result between the MDL and the RL value and they are estimated because of this.

#### Other Comments

Low levels of Ca, Cu, Fe, Mg, Ni, K, Na, and V were found in the field blank (sample 2001SK01R01). Analysis of the undigested field blank sample indicated the presence of Ca, Cu, Mg, Ni, Na, and V. For Fe and K the levels were low enough as to not significantly affect the remaining sample results for these analytes.

Samples 2001SK01S01 and D01 were designated as field duplicates; the analyte values correlate well.

Per discussion with Dr. J. V. Morris, no dilutions were made because of current ambiguities in the CRL Metals 003 SOP regarding upper limits of linearity for analytes such as Ca, Mg, and Na sample results.

### R5CRL Files

The following pathways were used for storing analysis information to the R5CRL file server for the this data set:

### Optima 3300 DV results:

```
(Vol 3 on 'R5crl')[H:]\metals\Rdilg\20010009\Icp\Optima 3300DV\Methods_ESAT (Vol 3 on 'R5crl')[H:]\metals\Rdilg\20010009\Icp\Optima 3300DV\narrative (Vol 3 on 'R5crl')[H:]\metals\Rdilg\20010009\Icp\Optima 3300DV\Results_ESAT (Vol 3 on 'R5crl')[H:]\metals\Rdilg\20010009\Icp\Optima 3300DV\SIFs_ESAT (Vol 3 on 'R5crl')[H:]\metals\Rdilg\20010009\Icp\Optima 3300DV\SIFs_ESAT (Vol 3 on 'R5crl')[H:]\metals\Rdilg\20010009\Icp\Optima 3300DV\SS processed data
```

.....

## CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
В	This flag is used when the analyte is found in the associated <u>B</u> lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
D .	This flag is used when the analyte concentration results from a required $\underline{D}$ ilution of the sample, extract or digestate.
E	This flag is used to identify analyte concentrations <u>Exceeding</u> the upper calibration range of the analytical instrument after dilution of the sample, extract or digestate.  The reported value is considered to be estimated
J	This flag is used when the analyte is <u>estimated</u> due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. ( <u>J</u> is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
M	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL <u>Method Detection Limit (MDL)</u> but below the CRL reporting limit (RL). This flag applies to all values in this concentration range and indicates the quantitated value is <u>estimated</u> due to its presence in this concentration range.
N	This flag applies to GC/MS TeNtatively Identified Compounds (TICs) that have a mass spectral library match.
Q	This flag applies to analyte data that are severely estimated due to quality control and/or $\underline{O}$ uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.
R	This flag applies to analyte data that are <u>Rejected</u> and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. <u>No value is reported with this qualification flag</u> .
U	This flag in used when the analyte was analyzed but <u>Undetected</u> in the sample. The CRL RL for the analyte accompanies this flag. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



## REGION 5 CENTRAL REGIONAL LABORATORY

## 536 SOUTH CLARK STREET

## CHICAGO, ILLINOIS 60605

Date:	DEC 1.5 2000
Subject:	Review of Region 5 Data for Himco Dump Code:054J
From:	ESAT , Chemist Region 5 Central Regional Laboratory
To:	Gwen Massenburg SR-6J
CRL Data S for analyses Results are	te the results for Site: Himco Dump Code:054J Set Number: 20010009 s of: Antimony, Arsenic, Cadmium, Lead, Selenium and Thallium e reported for sample numbers: 2001SK01S01, 2001SK01S02, 2001SK01D02, 2003, 2001SK01S04 and 2001SK01R01
( ) Data Ç	tus:  otable for Use  Oualified, but Acceptable for use  Unacceptable for Use

Lylina Suf	ferc Sto 1 1 1500 Coordinator and Date Received
CRL Data Management	Coordinator and Date Received
Date Transmitted:	₩E
	project leader fill out the customer survey form on the Region 5 Intranet: ov/crl/qa.html, ( by clicking on this link, or call George Schupp, CRL -1226).
Please sign and date this	form below and return it with any comments to:
Sy	lvia Griffin
•	ta Management Coordinator
	gion 5 Central Regional Laboratory
MI	L - 10C
Received by and Date	
Comments:	

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Method: GFAA for Water

Site: Himco Dump

Date: December 11, 2000

Prepared by: Stephen Connet

TDF: 5104-308 PWO: ESE51058 WAD: 05-00-4-04 Data Set: 20010009

**NARRATIVE** 

Six (6) water samples from the Himco Dump site [2001SK01S01(RES WELL 1), S02 (RES WELL 2), D02 (DUPLICATE OF S02), S03 (MW116A), S04 (101A), R01 (Method Blank)] were collected on November 15-16, 2000 and were received properly preserved by CRL on November 17, 2000. The samples were submitted to ESAT for analysis of antimony, arsenic, cadmium, lead, selenium, and thallium by GFAA.

The samples were digested following standard CRL 200.2 hot block water digestion protocols on November 20, 2000 (digestion batch 1241). Analyses were performed using 200.9 methods on the SIMAA 6000 using multi-element programs. Samples from SF20010010 (digestion batch 1245) were analyzed in the same analytical runs. Background interferences present in the thallium analyses required dilutions to obtain acceptable results.

All QC were within limits; all sample results are acceptable.

Non-detect results are reported to the reporting limit (RL). Results between the method detection limit (MDL) and the RL are reported as the instrument value with an "M" flag. Where appropriate, reported values are dilution corrected and results are flagged "D".

Analytical results were stored in the following database files:

 $\label{thm:limin} H:\rScrl\vol3\metals\sconnet\20010009\6000-SbTl\120400\ and\ \120500\ for\ antimony\ and\ thallium, \\ H:\rScrl\vol3\metals\sconnet\20010009\6000-AsSe\120600A\ and\ \120700\ for\ cadmium\ and\ lead, \\ H:\rScrl\vol3\metals\sconnet\20010009\6000-Tl\120600\ for\ thallium.$ 

This narrative and the Results/QC Summary spreadsheet are stored in: H:\r5crl\vol3\metals\sconnet\20010009\Reports\GFAA Narrative.wpd H:\r5crl\vol3\metals\sconnet\20010009\Reports\QCReport.wk4

Since RLIMS was unavailable, the AA metals analysis results are reported in a Lotus spreadsheet only. Time will be necessary in the future to enter all analysis results into RLIMS.

A 12.15.30

# ENVIRONMENTAL PROTECTION A JENCY REGION V

# CENTRAL REGIONAL LABORATORY FINAL RESULT REPORT FOR THE TEAM: METALS

)IVISION/BRANCH:

SUPERFUND

STUDY:

HIMCO DUMP

SAMPLING DATE:

11/15-16/00

OU NUMBER:

50102D

PRIORITY:

ROUTINE

LAB ARRIVAL DATE:

- 11/17/00

DATASET NUMBER:

20010009

LABORATORY ESAT

DUE DATE:

12/18/00

	CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER Antimony (ug/L)	WATER Arsenic (ug/L)	WATER Cadmium (ug/L)	WATER Lead (ug/L)	WATER Selenium (ug/L)	WATER Thallium (ug/L)
1	2001SK01S01	RES WELL 1	4U	2U	0.3U	2U	4U	4UD
2	2001SK01S02	RES WELL 2	4U	4UD	0.6UD	<b>2</b> U	8UD	6UD
3	2001SK01D02	DUPLICATE OF S02	4U	2Ū	0.6UD	2U	8UD ·	4UD
4	2001SK01S03	MW1 <u>16</u> A	16UD	10UD	0.9UD	2M	40UD	20UD
5	2001SK01S04	101A	8UD	6.4	0.6UD	2U	4U	20UD
6	2001SK01R01	Method Blank	4U	2U	0.3U	2U	<b>4</b> U	2Ų
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<u>AN</u>	ALYST	2 / 12-12-60	S. Connet	S. Connet	S. Connet	S. Connet	S. Connet	S. Connet

Reviewed By:\_

Date: 17-13-2000

Page 1 of 1

50,020 ENVIRONMENTAL PROTECTION AGENCY FIGH THE HEAL PETALS

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NU NUMBER	DU NUMBEN SUTURD DATABLE NUMBER AUTHER	STUDY	HAMING CHANDALL MIDELLY	₹.	CONTHACTOR		
נאר ווה	SAMPLE OLSCHIPTION	JOHN LUMIAN	HATHIX LUNTER.	MATHIN	MAINIX;	HAINIX	
HUMBER		11.51.	1ESI/49,	1ES1	TES1	1 1EST	
		UP 113 //6//	11.01/19/18 11 vi	Ur 175		0.113	
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CRL V.2; 3/85	1/88						

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## ENVIRONMENTAL PROTECTION AGENCY FOR THE TEAM: METALS

HL LOG NUMBER	FH READING FOR ALL SAMPLES WAS (1)	TOTAL METALS WATER TOTALICAP UG/L METIII	TOTAL METALS WATER AS UG/L METISS	TOTAL METALS WATER PB UG/L MET1191	TOTAL METALS WATER SB UG/L MET1201	TOTAL METALS WATER SE UG/L MET1211	TOTAL METAL WATER TL UG/L MET12
DUISKOIRO I	METHUN BLAME	X	M	X	_ X		_W
0015KU1501	15T RUS WELL 5056868	X	M	_  X		_X	_W
001 SK01 SU2	2m 5056846-847, MS/MSD	X	M	_[X]	_ \delta		
CUISKUIDUZ	DUPUCION OF SUL	X	Χ			_\\	_\X\
UU15KU15U3	MW116A 5056822	X	M	_  X	_  \ \	_W	
2001 SKUI SU4	101A 5-056814	X	M			_X	
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			-	-	-   -	- -	- -

## CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION			
В	This flag is used when the analyte is found in the associated <u>B</u> lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.			
D	This flag is used when the analyte concentration results from a required $\underline{D}$ ilution of the sample, extract or digestate.			
E	This flag is used to identify analyte acceptrations <u>Exceeding</u> the upper calibration range of the analytical instrument after dilution of the sample, extract or digestate.  The reported value is considered to be estimated			
J	This flag is used when the analyte is <u>estimated</u> due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. ( <u>J</u> is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)			
М	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL <u>Method Detection Limit (MDL)</u> but below the CRL reporting limit (RL). This flag applies to all values in this concentration range and indicates the quantitated value is <u>estimated</u> due to its presence in this concentration range.			
N	This flag applies to GC/MS TeNtatively Identified Compounds (TICs) that have a mass spectral library match.			
Q	This flag applies to analyte data that are severely estimated due to quality control and/or <i>Q</i> uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.			
R	This flag applies to analyte data that are <u>Rejected</u> and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. <u>No value is reported with this qualification flag</u> .			
U	This flag in used when the analyte was analyzed but <u>Undetected</u> in the sample. The CRL RL for the analyte accompanies this flag. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.			

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



Date:

## REGION 5 CENTRAL REGIONAL LABORATORY

## 536 SOUTH CLARK STREET

## **CHICAGO, ILLINOIS 60605**

Subject:	Review of Region 5 Data for Himco Dump Code:054J
From:	ESAT , Chemist Region 5 Central Regional Laboratory
То:	Guer Massenharg SR-6J
CRL Data Set for analyses o Results are	he results for Site: Himco Dump Code:054J  Number: 20010009  f: Mercury reported for sample numbers: 2001SK01S01, 2001SK01S02, 2001SK01D02, 3, 2001SK01S04 and 2001SK01R01
• •	

Interest Capture son en
CRL Data Management Coordinator and Date Received
Date Transmitted:
Please have the US EPA project leader fill out the customer survey form on the Region 5 Intranet: http://www.r5intra.epa.gov/crl/qa.html, ( by clicking on this link, or call George Schupp, CRL Sample Coordinator, at 3-1226).
Please sign and date this form below and return it with any comments to:
Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory ML - 10C
Received by and Date
Comments:

SAMPLING DATE WESTURED LAN ANNIVAL MATE 115 2100 UNE DATE 12/18/00 EAVISHMENTAL PUNTICION ACCOUNTY FOR THE FEAT SETALS

505686° 505682 15 CS652. 13.020-5 8.020.5 SAMPLE OBSCHIPTION I MATHIX. 1 MATHIX LONGON. I MATHIX..... II MATHIX.... II MATHIX.... II MATHIX... 1 -11235826 1 Ur 175 .... FL1235826 CONTRACTOR Ur 175..... NU NUMBER SOUTH DATABLE NUMBER SCOTCE PSTUDE HANGE LANDFUL PRIBBLEY FL1235826 1119 WETTE/C FE1235826 ies was - Res were 1 w118/16/6... FE1235826 DIVISION/HUANCH SUPERFUIND 2 m Resturing DUPLICATE IT SIZ MUTHED BLAME 1STIEBS WALL MWIIGA 10/4 Se Se Re CAL LIG Dua 1.05 Parameter: Mercury

Method: 245.2 \*DNS (WATER)

Site: Himco Dump Date: December 1, 2000

Prepared by: Stephen Connet

TDF: 5104-308 PWO: ESE51058 WAD: 05-00-4-04 Data Set: 20010009

#### **NARRATIVE**

Six (6) water samples from the Himco Dump site [2001SK01S01(RES WELL 1), S02 (RES WELL 2), D02 (DUPLICATE OF S02), S03 (MW116A), S04 (.01A), R01 (Method Blank)] were collected on November 15-16, 2000 and were received properly preserved by CRL on November 17, 2000. The samples were assigned to ESAT for mercury analysis.

Due to continuing problems with the autoprep station, the samples were manually digested with samples from data set 20010010 on November 29, 2000. Hydroxylamine was added and the samples analyzed on November 30, 2000. All digestion tubes were capped during digestion.

Non-detect results are reported to the reporting limit (RL).

All QC audits were in control; all sample results are acceptable.

This narrative, the instrument run file, QC summary form and results spreadsheet are stored in: I:\r5crl\vol1\Min\_nut\Sconnet\PSAMercury\HgWATER\20010009\20010009\_nar.wpd I:\r5crl\vol1\Min\_nut\Sconnet\PSAMercury\HgWATER\20010009\20010910.res I:\r5crl\vol1\Min\_nut\Sconnet\PSAMercury\HgWATER\20010009\QC Summary.wpd I:\r5crl\vol1\Min\_nut\Sconnet\PSAMercury\HgWATER\20010009\20010009 res.wpd

Since RLIMS was unavailable, the results are reported in a word-processing document only. Time will be necessary in the future to enter all results into RLIMS.

12-1-50

# ENVIRONMENTAL PROTECTION AGENCY REGION V

# CENTRAL REGIONAL LABORATORY FINAL RESULT REPORT FOR THE TEAM: MERCURY

DIVISION/BRANCH: SUPERFUND SAMPLING DATE: 11/15-16/00 LAB ARRIVAL DATE: 11/17/00 DUE DATE: 12/18/00 DU NUMBER: 50102D DATASET NUMBER: 20010009 STUDY: Himco Landfill PRIORITY: Routine LABORATORY: ESAT

	CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER MERCURY (μg/L)	FLAGS
1	2001SK01S01	RES WELL 1	No, thue d 0.5	U
2	2001SK01S02	RES WELL 2	0.5	U
3	2001SK01D02	DUPLICATE OF S02	0.5	U
4	2001SK01S03	MWI16A	0.5	U
5	2001SK01S04	101A	0.5	U
6	2001SK01R01	Method Blank	0.5	U
	Reporting Limit		0.5	
DATE OF ANALYSIS		,	11/30/00	
	ANALYST	17.1-50	S. Connet	

Reviewed by: Date: 12 5 1 3000

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1

## CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
В	This flag is used when the analyte is found in the associated <u>B</u> lank as well as the sample. It indicates possible blank contamination and warms the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
D	This flag is used when the analyte concentration results from a required $\underline{D}$ ilution of the sample, extract or digestate.
E	This flag is used to identify analyte concentrations <u>Exceeding</u> the upper calibration range of the analytical instrument after dilution of the sample, extract or digestate.  The reported value is considered to be estimated
J	This flag is used when the analyte is <u>estimated</u> due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. ( <u>J</u> is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
M	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL <u>Method Detection Limit (MDL)</u> but below the CRL reporting limit (RL). This flag applies to all values in this concentration range and indicates the quantitated value is <u>estimated</u> due to its presence in this concentration range.
N	This flag applies to GC/MS Te <u>V</u> tatively Identified Compounds (TICs) that have a mass spectral library match.
Q	This flag applies to analyte data that are severely estimated due to quality control and/or <i>Q</i> uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.
R	This flag applies to analyte data that are <u>Rejected</u> and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. <u>No value is reported with this qualification flag.</u>
U	This flag in used when the analyte was analyzed but <u>U</u> ndetected in the sample. The CRL RL for the analyte accompanies this flag. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



## REGION 5 CENTRAL REGIONAL LABORATORY

### 536 SOUTH CLARK STREET

## CHICAGO, ILLINOIS 60605

Date:	of the Confidence of the Confi
Subject:	Review of Region 5 Data for Himco Dump Code:054J
From:	ESAT , Chemist Region 5 Central Regional Laboratory
То:	Green Massenburg SR 6.1
CRL Data for analyse Results an	Set Number: 20010009 es of: Cyanide re reported for sample numbers: 2001SK01S01, 2001SK01S02, 2001SK01D02, S03, 2001SK01S04 and 2001SK01R01
( ) Data (	ntus: ptable for Use Qualified, but Acceptable for use Jnacceptable for Use

2 - 22 - 25 - 27 - 27 - 27 - 27 - 27 - 2	agement Coordinator and Date Received
Date Transmitt	ed:
http://www.r5ir	US EPA project leader fill out the customer survey form on the Region 5 Intranet: htra.epa.gov/crl/qa.html₃ (← by clicking on this link, or call George Schupp, CRL hator, at 3-1226).
Please sign and	date this form below and return it with any comments to:
	Sylvia Griffin
	Data Management Coordinator
	Data Management Coordinator Region 5 Central Regional Laboratory
	Data Management Coordinator Region 5 Central Regional Laboratory

.

# ENVIRONMENTAL PROTECTION AGENCY FOR THE TEAM: MINERALS - NUTRIENTS

LOG NUMBER	FAMPLE DESCRIPTION PH CHUCKUM OU ALL SAMPLUS, SAMPLUSLOOI SKOISUR PH RUMMING = 9 ALLOMOU SAMPLUSPH = 1,2	WATER PHENOLICS UG PHENOL/L MIN 74818	WATER CYANIDE UG CN/L MIN 74919	WATER GROSS ALPHA P CI/L MIN 75020	WATER CR <sup>18</sup> UG CR <sup>18</sup> /L MIN 74616	WATER MERCURY UG HG/L MIN 74717
HSKUIRUI	METHIN BLAME		X			
1 CHOICH	1151 pix 11171 5 1156866					
1 SK111502	2m 505687U-851/MSD		T X			
ISKUINUZ	2m 2056870-85/MSD 2m 2056870-85/MSD 5-056826 Dupinent it 502		X			
15K01503	MW11645-0568-24		- X			
	1017-5056815		-			
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					-   -	
		-	_		- -	
					-   -	

Method: 335.2NS (Cyanide)

Site: Himco Dump

Date: November 22, 2000

Prepared by: Stephen Connet

TDF: 5104-308 PWO: ESE51058 WAD: 05-00-4-04 Data Set: 20010009

**NARRATIVE** 

Six (6) water samples from the Himco Dump site [2001SK01S01(RES WELL 1), S02 (RES WELL 2), D02 (DUPLICATE OF S02), S03 (MW116A), S04 (101A), R01 (Method Blank)] were collected on November 15-16, 2000 and were received by CRL on November 17, 2000. All samples except S03 were pH > 12, which was pH 10. Distillation and analysis were performed on S03 without adjustment to the pH. The samples were assigned to ESAT for cyanide analysis.

The samples were checked with lead acetate and potassium iodide starch papers with negative results. The samples were distilled using the MIDI distillation method on November 21, 2000. The samples were analyzed on November 21, 2000 for cyanide using a Lachat QuickChem AE Autoanalyzer according to CRL methods. The samples were analyzed within the 14-day holding time limit.

All QC audits were in control: all sample results except S03, which is estimated due to a possible low bias, are acceptable. A control sample was diluted 1:1, distilled and analyzed with the sample batch: no criteria have been established for the sample. All results are reported to the reporting limit (8 ug/L).

The narrative, instrument run file, QC summary report and Results spreadsheet are stored in: I:\r5crl\vol1\Min\_nut\Sconnet\Lachat2(ESAT)\20010009\20010009\_nar.wpd I:\r5crl\vol1\Min\_nut\Sconnet\Lachat2(ESAT)\20010009\112100E.FDT I:\r5crl\vol1\Min\_nut\Sconnet\Lachat2(ESAT)\20010009\QC Summary.wpd I:\r5crl\vol1\Min\_nut\Sconnet\Lachat2(ESAT)\20010009\20010009\_res.wpd

Since RLIMS was unavailable, the results are reported in a word-processing document only. Time will be necessary in the future to enter all results into RLIMS.

11.22 00

## ENVIRONMENTAL PROTECTION AGENCY REGION V

## CENTRAL REGIONAL LABORATORY FINAL RESULT REPORT FOR THE TEAM: MINERAL/NUTRIENTS

DIVISION/BRANCH: SUPERFUND SAMPLING DATE: 11/15-16/00 LAB ARRIVAL DATE: 11/17/00 DUE DATE: 12/18/00 DU NUMBER: 50102D DATASET NUMBER: 20010009 STUDY: Himco Landfill PRIORITY: Routine LABORATORY: ESAT

	CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER CYANIDE (µg/L)	FLAGS
1	2001SK01S01	RES WELL 1 No. )	8	U
2	2001SK01S02		ccil 8	U
3	2001SK01D02	DUPLICATE OF S02	8	U
-4	2001SK01S03	MW116A	8	UJ
5	2001SK01S04	101A	8	U
6	2001SK01R01	Method Blank	8	U
	DATE OF ANALYSIS		11/21/00	
	ANALYST	11-77-00	S. Connet	

viewed by: Date: 1/1 381 100

Page 1 of 1

## CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
В	This flag is used when the analyte is found in the associated <u>B</u> lank as well as the sample. It indicates possible blank contamination and warms the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
D	This flag is used when the analyte concentration results from a required $\underline{D}$ ilution of the sample, extract or digestate.
E	This flag is used to identify analyte concentrations <u>Exceeding</u> the upper calibration range of the analytical instrument after dilution of the sample, extract or digestate.  The reported value is considered to be estimated
J	This flag is used when the analyte is <u>estimated</u> due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. ( <u>J</u> is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
М	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL <u>Method Detection Limit (MDL)</u> but below the CRL reporting limit (RL). This flag applies to all values in this concentration range and indicates the quantitated value is <u>estimated</u> due to its presence in this concentration range.
N	This flag applies to GC MS Te $\underline{N}$ tatively Identified Compounds (TICs) that have a mass spectral library match.
Q	This flag applies to analyte data that are severely estimated due to quality control and or $\underline{O}$ uantitation problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag.
R	This flag applies to analyte data that are $\underline{R}$ ejected and unusable due to severe quality control, quantitation and or qualitative identification problems. No other qualification flags are reported for this analyte. No value is reported with this qualification flag.
Ü	This flag in used when the analyte was analyzed but <u>Undetected</u> in the sample. The CRL RL for the analyte accompanies this flag. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



#### **REGION 5 CENTRAL REGIONAL LABORATORY**

#### 536 SOUTH CLARK STREET

#### CHICAGO, ILLINOIS 60605

Date:

MAR 2 7 2002

Subject:

Review of Region 5 Data for **HIMCO LF** 

From:

Francis A. Awanya, Chemist Region 5 Central Regional Laboratory

Region 3 Central Regional Laborato

Jun Margentung

To:

Attached are the results for Site: HIMCO LF

CRL Data Set Number: 20010009

for analyses of : Sulfate, Bromide, and Chloride

Results are reported for sample number 2001SK01S01, 2001SK01S02, 2001SK01D02,

2001SK01S03, and 2001SK01S04.

This transmittal corrects sample descriptions in the narrative and report form as follows. 2001SK01S01 to read 1st RES WELL and for 2001SK01R01 to read METHOD BLANK.

Results Status:
-----------------

(X	()	Acceptable for Use:
(	)	Data Qualified, but Acceptable for use:
(	)	Data Unacceptable for Use

Sylven Briffin	MAR 2 7 2002
CRL Data Management Coordinator and Date Re	eceived
Date Transmitted: MAR 2 7 2900	
Please have the US EPA project leader fill out the http://www.r5intra.epa.gov/crl/qa.html, ( by cli Sample Coordinator, at 3-1226).	-
Please sign and date this form below and return it	t with any comments to:
Sylvia Griffin	
Data Management Coordin	
Region 5 Central Regional ML - 10C	Laboratory
Received by and Date	
Comments:	

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



#### REGION 5 CENTRAL REGIONAL LABORATORY

#### 536 SOUTH CLARK STREET

#### CHICAGO, ILLINOIS 60605

Date

JAN 1 6 2001

Subject

Review of Region 5 Data for HIMCO LF

From

Francis A Awanya, Chemist FAA

Region 5 Central Regional Laboratory

To

Attached are the results for Site. HIMCO LF

CRL Data Set Number 20010009

for analyses of Sulfate, Bromide, and Chloride

Results are reported for sample numbers 2001SK01S01, 2001SK01S02, 2001SK01D02,

2001SK01S03, 2001SK01S04, and 2001SK01R01.

#### Results Status

(X) Acceptable for Use.

(X) Data Qualified, but Acceptable for use Bromide (sample 2001SK01S03)

( ) Data Unacceptable for Use

JAN	1	£,	5,6(1)

CRL Data Management Coordinator and Date Received

Date Transmitted. JAN 1 € 2001

Please have the US EPA project leader fill out the customer survey form on the Region 5 Intranet: http://www.r5intra.epa.gov/crl/qa.html\_( by clicking on this link, or call George Schupp, CRL Sample Coordinator, at 3-1226)

Please sign and date this form below and return it with any comments to

Sylvia Griffin

Data Management Coordinator

Region 5 Central Regional Laboratory

ML - 10C

Received by and Date

Comments:



Data Set Number:	20010009	Parameter:	Bromide, Sulfate, and Chloride
Facility Name:	HIMCO LF		
Study Name:	HIMCO LF		
Date of Narrative:	01/03/2001	_ Analyst:	Francis A. Awanya
		Signature:	FAX

### ANALYSIS CASE NARRATIVE

Six (6) routine water samples were collected for the above study between 11/15/2000 and 11/16/2000. The samples arrived at the Central Regional Laboratory (CRL) on 11/17/2000. CRL sample identification numbers (CRL Sample ID) were assigned to the samples. The sample descriptions or station numbers were obtained from the Analysis Request Form (ARF). The following samples were received for analysis;

CRL Sample ID	Sample Description
2001SK01S01	1st RES WELL
2001SK01R01	METHOD BLANK
2001SK01S02	2 <sup>nd</sup> RES WELL MS/MSD
2001SK01D02	DUPLICATE
2001SK01S03	MW116A
2001SK01S04	101A

Samples were checked out for bromide, sulfate, and chloride analysis from the CRL sample custodian on 12/12/2000. The samples were properly preserved by refrigeration. They were transferred to the Analytical and Inorganic (A&I) laboratory section of the CRL, and kept in a sample storage refrigerator until all other required analyses were completed.

#### SAMPLE ANALYSIS:

All samples were analyzed for bromide, sulfate and chloride using CRL Standard Operating Procedure (CRL.SOP) AIG045 (Method reference 300 A & B, EPA/600/R-93-100). No additional sample preparation was necessary. The instrument was calibrated on 12/13/2000, and samples analysis was completed between 12/13-14/2000. Analyses were completed within the required holding times.

#### **QUALITY CONTROL (QC)**:

Analysis results were evaluated using the QC requirements of CRL.SOP AIG045 (Method reference 300 A & B, EPA/600/R-93-100). Required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the limits with the following exception.

**Bromide:** The concentrations of bromide found in sample 2001SK01S03 (3.75 mg Br/L), exceeded the upper calibration standard (2.0 mg Br/L). This was not detected in time for the analysis to be repeated within the holding time. A "J" flag is applied to the bromide result for

Data Set Number:	20010009	Parameter:	Bromide, Sulfate, and Chloride
Facility Name:	HIMCO LF		
Study Name:	<u>HIMCO LF</u>		
Date of Narrative:	01/03/2001	Analyst:	Francis A. Awanya
		Signature	: Parat

#### **ANALYSIS CASE NARRATIVE**

sample 2001SK01S03. Bromide concentrations in this sample should be considered estimated. A review of the peak areas indicated that the results were within the instrument linear range for the low-level calibration. The data is acceptable for use with qualification as noted.

#### SAMPLE RESULTS AND REPORTING:

Sulfate and Chloride: A "U" flag was applied to sulfate and chloride results for sample 2001SK01R01. Sulfate and chloride concentrations in the sample were found to be below detection. "D" flags were assigned to all remaining sulfate and chloride results. Assay concentrations exceeded the upper calibration standard and sample dilutions were required.

**Bromide:** "U" flags were applied to bromide results for samples 2001SK01R01 and 2001SK01S02. Bromide concentrations found in those samples were below detection. "M" flags were applied to bromide results for samples 2001SK01S01, D02, and 304. The concentrations of bromide in those samples were found to be above detection but below the reporting limit. A "J" flag was applied to bromide result for sample 2001SK01S03.

A code defining all flags is attached with the data transmittal form.

#### MANUAL PEAK INTEGRATION:

No manual peak integration was used to process the results.

#### **ELECTRONIC DATA:**

Electronic data are archived in:

H:\\R5crl\VOL1\MIN\_NUT\FAWANYA\DX500\_SYSTEM3\_CD20\20010009\..under the following additional folders;

1. Autosample Schedules, 2. Datafiles 3. Method files 4. Narrative.

CRL SOP HK015	i Date (67 January 2) (8)	Revision No. 1	j
Data review for the Ana	alytical and Inorganic Group	Page - of -	

## ATTACHMENT I

## CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
В	This flag is used when the analyte is found in the associated $\underline{B}$ lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data
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E	This flag is used to identify analyte concentrations <u>Exceeding</u> the upper calibration range of the analytical instrument after dilution of the sample, extract or digestate <u>The reported value is considered to be estimated</u>
J	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL reporting limit (RL) but the quantitated value is <u>estimated</u> due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference.  ( <u>J</u> is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency)
М	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, at or above the CRL <u>Method Detection Limit (MDL)</u> but below the CRL reporting limit (RL). This flag applies to all values in this concentration range and indicates the quantitated value is <u>estimated</u> due to its presence in this concentration range.
N	This flag applies to GCMS TICs that have No mass spectral library match
Q	This flag applies to analyte data that are severely estimated due to quality control and/or <i>Quantitation</i> problems, but are confirmed to be qualitatively present in the sample. No value is reported with this qualification flag
R	This flag applies to analyte data that are <u>Rejected</u> and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. <u>No value is reported with this qualification flag</u>
U	This flag in used when the analyte was analyzed but <u>Undetected</u> in the sample. The CRL RL for the analyte accompanies this flag. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

### ENVIRONMENTAL PROTECTION AGENCY REGION V CENTRAL REGIONAL LABORATORY

## FINAL RESULT REPORT FOR THE TEAM: MINERAL/NUTRIENTS

DIVISION/BRANCH: SUPERFUND SAMPLING DATE: 11/15 - 16/2000 LAB ARRIVAL DATE: 11/17/2000 DUE DATE: 12/18/2000

DU NUMBER: 50102D DATASET NUMBER: 20010009 STUDY: HIMCO LF PRIORITY: Routine LABORATORY: CRL

	CRL LOG	SAMPLE DESCRIPTION	BROMIDE IN	SULFATE IN	CHLORIDE IN	
			WATER (mg Br <sup></sup> /L)	WATER (mg SO₄*/L)	WATER (mg Cl <sup>-</sup> /L)	
1	2001SK01S01	1st RES WELL	0.04 M	79.3 D	96.5 D	
2	2001SK01R01	METHOD BLANK	0.014 U	0.025 U	0.050 U	 
3	2001SK01S02	2 <sup>nd</sup> RES WELL	0.014 U	105 D	99.9 D	
4	2001SK01D02	DUPLICATE	0.03 M	104 D	98.4 D	
5	2001SK01S03	MW116A	3.75 J	1020 D	26.0 D	
6	2001SK01S04	101A	0.32 M	177 D	27.2 D	
D.	ATE OF ANALYSIS		12/13/2000	12/13-14/2000	12/13-14/2000	
	ANALYST		FANA	FAA	Front	

Reviewed by: E & D	ate: 3/27/02
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Page 1 of 1

50/0211

## ENVIRONMENTAL PROTECTION AGENCY FOR THE TEAMS MINERALS-NUTRIENTS

	MAHEN SUPERTURN	SAMPLING	DATE 11/15/16/15	LAN ARRIVAL DATE	1/17/66 DIE 11	ATE 12/iste	
HIL HUMBER	11/1217 DATASET NUMHE	R 2001-607 STUDY	HMCC SAMPT,	CC PRIMITY N'	CONTRACTOR		
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

E00F5

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.001 Date Received: 05/05/00

Lab File ID: H1040 Date Extracted: 05/09/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
		1	
51-28-5	2,4-Dinitrophenol	20	U
100-02-7	4-Nitrophenol	20	U
	Dibenzofuran	5	U
	2,4-Dinitrotoluene	5	U
	Diethylphthalate	5	U
7005-72-3	4-Chlorophenyl-phenylether_	5	ן טן
	Fluorene	5	U
	4-Nitroaniline	20	ן טן
534-52-1	4,6-Dinitro-2-methylphenol	1 20	U
1 86-30-6	N-Nitrosodiphenylamine (1)	5	TU !
101-55-3	4-Bromophenyl-phenylether	5	lu l
118-74-1	Hexachlorobenzene	5	\U \
87-86-5	Pentachlorophenol	1 20	ן טן
85-01-8	Phenanthrene	5	ן טן
120-12-7	Anthracene		U
84-74-2	Di-n-butylphthalate	5	U !
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	{U {
1 85-68-7	Butylbenzylphthalate	5	U
	3,3'-Dichlorobenzidine	5	U
	Benzo(a) anthracene	5	U
	Chrysene	5	U
	bis(2-Ethylhexyl)phthalate	2	J
	Di-n-octylphthalate		<b>ט</b>
205-99-2	Benzo(b) fluoranthene		U
1 207-08-9	Benzo(k)fluoranthene	5	Ū
50-32-8	Benzo(a)pyrene	5	บ
	Indeno(1,2,3-cd)Pyrene	5	U
53-70-3	Dibenz(a,h)anthracene		<u></u> ט
191-24-2	Benzo(g,h,i)perylene		Ū
·		. ·	• '

(1) - Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

#### TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

E00F5

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6066.001

Date Received: 05/05/00

Lab File ID: H1040

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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1LCB

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EOOFF

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.003

Date Received: 05/03/00

Lab File ID: H1032

Date Extracted: 05/05/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION

CAS NO.	COMPOUND	(ug/L)	Q
108-95-2		:	U
	bis(2-Chloroethyl)ether	:	U
	2-Chlorophenol	·	U
	2-Methylphenol	1	U
	2,2'-oxybis(1-Chloropropane)	:	U
	4-Methylphenol	:	U
	N-Nitroso-di-n-propylamine	2	U
	Hexachloroethane		U
	Nitrobenzene	:	U !
	Isophorone	:	U
	2-Nitrophenol	-	U
	2,4-Dimethylphenol	•	U
	bis(2-Chloroethoxy)methane	- E'	ן ט
120-83-2	2,4-Dichlorophenol	5	U
91-20-3	Naphthalene	5	U
	4-Chloroaniline	· I	\U \
	Hexachlorobutadiene	5	U ¦
	4-Chloro-3-methylphenol	5	lu l
91-57-6	2-Methylnaphthalene	5	U
177-47-4	Hexachlorocyclopentadiene	5	tu t
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
1 91-58-7	2-Chloronaphthalane	5	ן טן
88-74-4	2-Nitroaniline	20	ן טן
131-11-3	Dimethylphthalate	! 5	ן טן
1 208-96-8	Acenaphthylene	<b>!</b> 5	U
1 606-20-2	2,6-Dintrotoluene	5	U I
1 99-09-2	3-Nitroaniline	20	lu i
83-32-9	Acenaphthene	5	U
		1	11

#### 1LCC

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EOOFF

CONCENTRATION

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Date Received: 05/03/00 Lab Sample ID: 6050.003

Lab File ID: H1032 Date Extracted: 05/05/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	(ug/L)	Q
51-28-5	2,4-Dinitrophenol	20	U
	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	5	U
	2,4-Dinitrotoluene	5	U
	Diethylphthalate	2	J
	4-Chlorophenyl-phenylether	5	U
	Fluorene	5	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
	N-Nitrosodiphenylamine (1)	<b>¦</b> 5	U
	4-Bromophenyl-phenylether	5	U
1118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	5	U
120-12-7	Anthracene	5	U
184-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	5	ן ט
56-55-3	Benzo(a)anthracene	5	U
218-01-9	Chrysene	5	[U
117-81-7	bis(2-Ethylhexyl)phthalate	18	11
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b) fluoranthene	5	U
1 207-08-9	Benzo(k)fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	U
193-39-5	Indeno(1,2,3-cd)Pyrene	5	U
53-70-3	Dibenz(a,h)anthracene	5	ן ט

(1) - Cannot be separated from Diphenylamine

| 191-24-2----Benzo(g,h,i)perylene\_\_\_

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EOOFF
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Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6050.003

Date Received: 05/03/00

Lab File ID: H1032

Date Extracted: 05/05/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EOOFG

Lab Sample ID: 6050.004

Date Received: 05/03/00

Lab File ID: H1033

Date Extracted: 05/05/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO. COMPOUND

CONCENTRATION	
(ug/L)	Q

	(-5/2/	¥
108-95-2Phenol	5	U
111-44-4bis(2-Chloroethyl)ether	5	Ū i
95-57-82-Chlorophenol	5	Ū
95-48-72-Methylphenol	-	U
108-60-12,2'-oxybis(1-Chloropropane)		Ū
106-44-54-Methylphenol		Ū
621-64-7N-Nitroso-di-n-propylamine_	_	Ū
67-72-1Hexachloroethane		Ū
98-95-3Nitrobenzene	5	iu i
78-59-1Isophorone	-	Ū
88-75-52-Nitrophenol	_	U
105-67-92,4-Dimethylphenol		Ū
111-91-1bis(2-Chloroethoxy)methane		Ū
120-83-22,4-Dichlorophenol		Ū
91-20-3Naphthalene	5	U i
106-47-84-Chloroaniline	5	U i
87-68-3Hexachlorobutadiene	5	U
59-50-74-Chloro-3-methylphenol	5	U
91-57-62-Methylnaphthalene	5	U
77-47-4Hexachlorocyclopentadiene	5	U
88-06-22,4,6-Trichlorophenol	5	U
95-95-42,4,5-Trichlorophenol	20	U
91-58-72-Chloronaphthalane	5	U
88-74-42-Nitroaniline	20	U
131-11-3Dimethylphthalate		U
208-96-8Acenaphthylene	5	U
606-20-22,6-Dintrotoluene	5	ט [
99-09-23-Nitroaniline	20	U
83-32-9Acenaphthene	5	U
		l

1LCC

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EOOFG

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.004

Date Received: 05/03/00

Lab File ID: H1033

Date Extracted: 05/05/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
51-28-5 100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 84-74-2 129-00-0 85-68-7 91-94-1 56-55-3 218-01-9 117-84-0 117-84-0 205-99-2 207-08-9 50-32-8 193-39-5	2,4-Dinitrophenol4-Nitrophenol4-NitrophenolDibenzofuran2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenyletherFluorene4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluoranthene	20 20 5 5 3 5 20 20 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	טטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט
191-24-2	Benzo(g,h,i)perylene		U

(1) - Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EOOFG

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.004

Date Received: 05/03/00

Lab File ID: H1033

Date Extracted: 05/05/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EOOFH

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_ SDG No.: E00FL

Date Received: 05/03/00

Lab Sample ID: 6050.005

Lab File ID: H1034

Date Extracted: 05/05/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
108-95-2 111-44-4 95-57-8 95-48-7 108-60-1 106-44-5 621-64-7 98-95-3 78-59-1 88-75-5 105-67-9 111-91-1 120-83-2 91-20-3 91-57-6	Phenolbis(2-Chloroethyl)ether2-Chlorophenol2-Methylphenol2,2'-oxybis(1-Chloropropane)4-MethylphenolN-Nitroso-di-n-propylamineHexachloroethaneNitrobenzeneIsophorone2,4-Dimethylphenol2,4-Dimethylphenol2,4-Dichlorophenol2,4-Dichlorophenol4-Chloroaniline4-Chloro-3-methylphenol2-Methylnaphthalene	(ug/L) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ם מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ
77-47-4 88-06-2 95-95-4 91-58-7 88-74-4 131-11-3 208-96-8 606-20-2 99-09-2	Hexachlorocyclopentadiene2,4,6-Trichlorophenol2,4,5-Trichlorophenol2-Chloronaphthalane2-NitroanilineDimethylphthalateAcenaphthylene2,6-Dintrotoluene3-NitroanilineAcenaphthene	5 5 20 5 20 5 5 5 5 5	U U U U U U U U U U U U U U U U U U U

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EOOFH

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.005

Date Received: 05/03/00

Lab File ID: H1034

Date Extracted: 05/05/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

CONCENTRATION

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	(ug/L)	Q
51-28-5	2,4-Dinitrophenol	20	U
100-02-7	4-Nitrophenol	20	: :
132-64-9	Dibenzofuran		lu i
	2,4-Dinitrotoluene	5	lu i
84-66-2	Diethylphthalate	3	İJİ
	4-Chlorophenyl-phenylether	5	U i
	Fluorene		U
	4-Nitroaniline	20	: :
	4,6-Dinitro-2-methylphenol		: :
	N-Nitrosodiphenylamine (1)		U
101-55-3	4-Bromophenyl-phenylether	. I	U
118-74-1	Hexachlorobenzene	1	U
	Pentachlorophenol	20	1 1
85-01-8	Phenanthrene		lu i
	Anthracene	5	U
	Di-n-butylphthalate	5	İυİ
206-44-0	Fluoranthene	5	ĺυ
129-00-0		5	U
	Butylbenzylphthalate	4	J
91-94-1	3,3'-Dichlorobenzidine	5	ן ט
56-55-3	Benzo(a)anthracene	5	U
218-01-9	Chrysene	5	U
	bis(2-Ethylhexyl)phthalate	19	1
117-84-0	Di-n-octylphthalate	4	J
205-99-2	Benzo(b)fluoranthene	5	U
1 207-08-9	Benzo(k)fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	U [
193-39-5	Indeno(1,2,3-cd)Pyrene	5	U
53-70-3	Dibenz(a,h)anthracene	5	U
191-24-2	Benzo(g,h,i)perylene	5	U
<u> </u>			<b> </b>

(1) - Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

#### TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EOOFH

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.005

Date Received: 05/03/00

Lab File ID: H1034

Date Extracted: 05/05/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

	COMPOUND NAME	RT	EST. CONC.	Q
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EOOFJ

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6050.006

Date Received: 05/03/00

Lab File ID: H1035

Date Extracted: 05/05/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION (ug/L) Q CAS NO. COMPOUND

		(49/1/	×
108-95-2	Phenol	5	U
	bis(2-Chloroethyl)ether		Ū
	2-Chlorophenol	5	Ū
95-48-7	2-Methylphenol	5	U
108-60-1	2,2'-oxybis(1-Chloropropane)	<del>-</del>	U
	4-Methylphenol	5	Ū
	N-Nitroso-di-n-propylamine	<del>-</del>	Ū
	Hexachloroethane	5	lυ
98-95-3	Nitrobenzene	5	lū i
78-59-1	Isophorone	5	וֹט וֹ
88-75-5	2-Nitrophenol	5	lυ i
	2,4-Dimethylphenol	5	U
	bis(2-Chloroethoxy)methane	5	U
	2,4-Dichlorophenol	5	U
	Naphthalene	5	U
	4-Chloroaniline	5	U
1 87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalane	5	U !
88-74-4	2-Nitroaniline	20	[U ]
131-11-3	Dimethylphthalate	5	U
208-96-8	Acenaphthylene	5	U
606-20-2	2,6-Dintrotoluene	5	U
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	5	U

1LCC

EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

E00FJ

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.006 Date Received: 05/03/00

Lab File ID: H1035 Date Extracted: 05/05/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

		CONCENTRATION	
CAS NO.	COMPOUND	(ug/L)	Q
			<del></del>
51-28-5	2,4-Dinitrophenol	20	ן ח
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	·	lu l
121-14-2	2,4-Dinitrotoluene	5	ן טן
	Diethylphthalate		<b> </b> J
7005-72-3	4-Chlorophenyl-phenylether	5	U
	Fluorene	5	U
	4-Nitroaniline	20	ן טן
534-52-1	4,6-Dinitro-2-methylphenol	20	U
	N-Nitrosodiphenylamine (1)		U
	4-Bromophenyl-phenylether	<del>-</del> .	ן טן
	Hexachlorobenzene	<b>-</b> ,	U
	Pentachlorophenol	20	TU I
	Phenanthrene	5	lu i
	Anthracene	- :	Ū
	Di-n-butylphthalate	_ •	Ū
	Fluoranthene		ט ו
129-00-0	Pvrene		Ū
	Butylbenzylphthalate	- :	Ιυ Ι
91-94-1	3,3'-Dichlorobenzidine		Ü
56-55-3	Benzo(a) anthracene	-   5	Ü
	·Chrysene		Ū
	bis(2-Ethylhexyl)phthalate		
117-84-0	Di-n-octylphthalate		Ū
205-99-2	Benzo(b) fluoranthene		U
207-08-9	Benzo(k) fluoranthene	-	U
50-32-8	Benzo(k) Fruoranchene		T I
193-39-5	Indeno(1,2,3-cd)Pyrene		ָ ט
! 53-70-3	Dibenz(a,h)anthracene	- !	ָ ט
JJ-70-J   191-24-2.	Benzo(g,h,i)perylene		ט
TDI-64-6	Benzo(g,n,1) peryrene	-	
		- ' <del></del>	· ——

(1) - Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

### TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EOOFJ

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6050.006

Date Received: 05/03/00

Lab File ID: H1035

Date Extracted: 05/05/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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1LCB EPA SAMPLE NO. LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

EOOFK

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.007 Date Received: 05/03/00

Date Extracted: 05/05/00 Lab File ID: H1036

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION CAS NO. COMPOUND (ug/L)

108-95-2	Phenol	5	U
	bis(2-Chloroethyl)ether	5	U
95-57-8	2-Chlorophenol	5	บ
	2-Methylphenol	5	U
	2,2'-oxybis(1-Chloropropane)	5	U
	4-Methylphenol	5	U
	N-Nitroso-di-n-propylamine	5	U
	Hexachloroethane	[ 5	U
	Nitrobenzene	5	U
	Isophorone	5	U
	2-Nitrophenol	5	U
	2,4-Dimethylphenol	<u> </u>	U
	bis(2-Chloroethoxy) methane	5	U
	2,4-Dichlorophenol	5	ប
	Naphthalene	5	U
	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
	2-Methylnaphthalene	5	U
	Hexachlorocyclopentadiene	5	U
	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalane	5	U
88-74-4	2-Nitroaniline	20	Ū
	Dimethylphthalate		Ū
208-96-8	Acenaphthylene	ì	U
606-20-2	2,6-Dintrotoluene	5	Ū
99-09-2 <b></b> -	3-Nitroaniline	20	: -
83-32-9	Acenaphthene	5	Ū
	* * * * <del></del>	1	j -

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EOOFK

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.007

Date Received: 05/03/00

Lab File ID: H1036

Date Extracted: 05/05/00

· Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
51-28-5 100-02-7 132-64-9 121-14-2 84-66-2 7005-72-3 86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 84-74-2 206-44-0 129-00-0 85-68-7	2,4-Dinitrophenol4-NitrophenolDibenzofuran2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenyletherFluorene4-Nitroaniline4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorobenzenePentachlorophenolPhenanthreneAnthraceneDi-n-butylphthalateFluoranthenePyreneButylbenzylphthalate	(ug/L)  20 20 5 5 5 20 20 5 5 5 5 5 5 5 5 5 5	ם מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ מ
85-68-7 91-94-1 56-55-3 218-01-9 117-81-7	Butylbenzylphthalate3,3'-DichlorobenzidineBenzo(a) anthraceneChrysenebis(2-Ethylhexyl)phthalate	5 5 5 5 17	U U U U
117-84-0 205-99-2 207-08-9 50-32-8 193-39-5 53-70-3	Di-n-octylphthalateBenzo(b) fluorantheneBenzo(k) fluorantheneBenzo(a) pyreneIndeno(1,2,3-cd) PyreneDibenz(a,h) anthraceneBenzo(g,h,i) perylene	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	U U U U U U
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(1) - Cannot be separated from Diphenylamine

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

## TENTATIVELY IDENTIFIED COMPOUNDS

EOOFK

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: 6050.007 Date Received: 05/03/00

Lab File ID: H1036 Date Extracted: 05/05/00

Sample Volume: 1000 (mL) Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (ug/L)	Q
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26.		<u> </u>	<u> </u>	<u> </u>
27.				
28.				ii
29.		<u> </u>		i
30.				i — i
				ii

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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

E01TP

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.010 Date Received: 05/05/00

Date Extracted: 05/09/00 Lab File ID: H1049

Sample Volume: 1000 (mL) Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1.0 (uL)

CONCENTRATION CAS NO. COMPOUND (ug/L)Q

		<del></del>
108-95-2Phenol	5	U
111-44-4bis(2-Chloroethyl)ether	5	ับ
95-57-82-Chlorophenol		ับ
95-48-72-Methylphenol	5	U
108-60-12,2'-oxybis(1-Chloropropane)	5	Ū
106-44-54-Methylphenol	5	Ū
621-64-7N-Nitroso-di-n-propylamine	5	Ū
67-72-1Hexachloroethane	5	บ
98-95-3Nitrobenzene	5	U
78-59-1Isophorone	5	U
88-75-52-Nitrophenol	:	U
105-67-92,4-Dimethylphenol	5	U
111-91-1bis(2-Chloroethoxy)methane	!	Ü
120-83-22,4-Dichlorophenol	· -	Ū
91-20-3Naphthalene	:	U
106-47-84-Chloroaniline	5	บ
87-68-3Hexachlorobutadiene	· -	บ
59-50-74-Chloro-3-methylphenol	5	
91-57-62-Methylnaphthalene	:	U
77-47-4Hexachlorocyclopentadiene	j 5	
88-06-22,4,6-Trichlorophenol	:	บ
95-95-42,4,5-Trichlorophenol	20	
91-58-72-Chloronaphthalane	5	
88-74-42-Nitroaniline	20	
131-11-3Dimethylphthalate		U
208-96-8Acenaphthylene	:	บ
606-20-22,6-Dintrotoluene	:	บ
99-09-23-Nitroaniline	20	•
83-32-9Acenaphthene	:	!ប
- Constant - Constant	1	
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EPA SAMPLE NO.

LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EO1TP

Lab Name: PDP ANALYTICAL SERVICES Contract: 68-D7-0004

Lab Code: PDP Case No.: 27986 SAS No.: \_\_\_ SDG No.: E00FL

Lab Sample ID: 6066.010 Date Received: 05/05/00

Lab File ID: H1049 Date Extracted: 05/09/00

Sample Volume: 1000 (mL) Date Analyzed: 05/17/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CONCENTRATION

CAS NO. COMPOUND (ug/L) (

CAS NO.	COMPOUND	(ug/L)	Q
51-28-5	2,4-Dinitrophenol	20	IJ
100-02-7	4-Nitrophenol	20	•
	Dibenzofuran		U
	2,4-Dinitrotoluene	5	U
84-66-2	Diethylphthalate		J
7005-72-3	4-Chlorophenyl-phenylether_		U
86-73-7	Fluorene	5	U
	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
	N-Nitrosodiphenylamine (1)	5	U
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	5	U
120-12-7	Anthracene	5	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	5	U
56-55-3	Benzo(a)anthracene	5	U
218-01-9	Chrysene	5	U
	bis(2-Ethylhexyl)phthalate	2	J
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b) fluoranthene	5	U
207-08-9	Benzo(k)fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	U
193-39-5	Indeno(1,2,3-cd)Pyrene	5	U
53-70-3	Dibenz(a,h)anthracene	5	U
191-24-2	Benzo(g,h,i)perylene	5	ប
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(1) - Cannot be separated from Diphenylamine



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LOW CONC. WATER SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SLCS76 Contract: 68-D7-0004

Lab Name: PDP ANALYTICAL SERVICES

Lab Code: PDP Case No.: 27986 SAS No.: SDG No.: E00FL

Lab Sample ID: SVOL608

Date Received:

Lab File ID: H1039

Date Extracted: 05/09/00

Sample Volume: 1000 (mL)

Date Analyzed: 05/16/00

Concentrated Extract Volume: 1000 (uL) Dilution Factor: 1.0

Injection Volume: 1 (uL)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
100-02-7	2,4-Dinitrophenol4-Nitrophenol2,4-DinitrotolueneDiethylphthalate4-Chlorophenyl-phenyletherFluorene4,6-Dinitro-2-methylphenolN-Nitrosodiphenylamine (1)4-Bromophenyl-phenyletherHexachlorophenolPentachlorophenolPhenanthreneDi-n-butylphthalateFluorantheneButylbenzylphthalateBenzo(a) anthracenebis(2-Ethylhexyl)phthalate	20 5 11 13 5 20 20 12 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ם מממממממממ מממ מממ מ
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(1) - Cannot be separated from Diphenylamine